Fishery Data Series No. 12-18

Subsistence and Personal Use Salmon Harvests in the Alaska Portion of the Yukon River Drainage, 2010

by

Deena M. Jallen

Scott D. Ayers

and

Toshihide Hamazaki

April 2012

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

FISHERY DATA SERIES NO. 12-18

SUBSISTENCE AND PERSONAL USE SALMON HARVESTS IN THE ALASKA PORTION OF THE YUKON RIVER DRAINAGE, 2010

by

Deena M. Jallen Alaska Department of Fish and Game, Division of Commercial Fisheries, Fairbanks

Scott D. Ayers Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage

and

Toshihide Hamazaki
Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1565

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Deena M. Jallen
Alaska Department of Fish and Game, Division of Commercial Fisheries,
1300 College Road, Fairbanks, AK 99701-1599, USA
Scott D. Ayers
Alaska Department of Fish and Game, Division of Commercial Fisheries,
333 Raspberry Road, Anchorage, AK 99518-1599, USA
Toshihide Hamazaki,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
333 Raspberry Road, Anchorage, AK 99518-1599, USA

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

This annual study estimates subsistence and personal use salmon harvests within the Alaska portion of the Yukon River drainage. Most Yukon Area communities have no regulatory requirements to report their subsistence salmon harvest. For these remote communities, the Alaska Department of Fish and Game used a voluntary survey program. Harvest information was collected through postseason household interviews, follow-up telephone interviews, postal questionnaires, and harvest calendars. Stratified random sampling techniques were used to select Yukon Area households to be interviewed. In 2010 a total of 959 (79% of selected) households were contacted in 33 communities. Data from surveyed households were expanded to estimate the harvest of unsurveyed households. In more accessible portions of the Yukon Area, fishermen are required to document their harvest on a subsistence or personal use permit. In 2010, 538 subsistence and personal use permits were issued, with 94% returned. Of these returned permits, 270 reported fishing. This report also documents subsistence fish given to households from various test fish projects. The total subsistence and personal use harvest throughout the Yukon Area was estimated to be 44,721 Chinook *Oncorhynchus tshawytscha*, 88,692 summer chum *O. keta*, 71,854 fall chum *O. keta*, and 14,107 coho *O. kisutch* salmon. The primary fishing gear types used were set gillnets (48%), drift gillnets (45%), and fish wheels (6%). Approximately 1,751 households own 5,058 dogs and 223 households fed an estimated 59,259 salmon to dogs.

Key words: Tanana River, Yukon River, Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, and coho salmon *O. kisutch*, northern pike *Esox lucius*, inconnu *Stenodus leucichthys*, whitefish *Coregonus* spp., harvest, personal use, subsistence.

INTRODUCTION

The Yukon Area includes all waters of Alaska within the Yukon River drainage and all coastal waters of Alaska from Point Romanof southward to the Naskonat Peninsula (Figure 1). For management purposes, the Yukon Area is divided into 7 districts and 10 subdistricts. The Lower Yukon Area consists of coastal waters and the Yukon River drainage from its mouth to Old Paradise Village (river mile 306) and is composed of Districts 1, 2, and 3. The Upper Yukon Area consists of the Yukon River drainage upstream of Old Paradise Village to the Canada border (river mile 1,224) and is divided into Districts 4, 5, and 6. The Coastal District includes the remainder of coastal Yukon Area waters not included in District 1. In this report the difference between the designations "Yukon River" and "Yukon Area" is that the Yukon Area includes the Coastal District. Yukon River totals apply to data considered for the U.S./Canada border commitments and Yukon Area refers to the management area for which the report applies.

The Yukon River drainage supports 5 species of Pacific salmon: Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, coho *O. kisutch*, pink *O. gorbuscha*, and sockeye *O. nerka* salmon. The majority of subsistence and personal use harvests are made up of Chinook, chum, and coho salmon. The chum salmon return consists of 2 temporally and genetically distinct stocks: early (summer chum) and late (fall chum). Subsistence salmon fishing activities in the Yukon Area typically begin in late May and continue through early October. Salmon fishing in May and October is highly dependent upon river ice conditions.

Residents of the communities in the Yukon River drainage are primarily of Yup'ik Eskimo and Athabascan Indian descent. Excluding the greater Fairbanks area (approximately 97,580 people), the most recent census indicates the population of rural Yukon Area residents within the Denali Borough, Southeast Fairbanks, Yukon-Koyukuk, and Wade Hampton Census Areas was approximately 21,900 people in 2010. The recent 5 year (2005–2009) average rural population in the Yukon Area has remained relatively stable at approximately 22,120 people. The decennial U.S. Census was conducted in the spring of 2010, and in the 33 communities sampled in the subsistence survey project the population was 9,945 people (U.S. Census Bureau American Fact Finder,

http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#none, Accessed May 2011).

Yukon Area communities have a long tradition of harvesting salmon for subsistence use. Fishing activities are usually based from a fish camp or a home community. Extended family groups, representing 2 or more households, often work together to harvest, cut, and preserve salmon for subsistence use. Some households from Yukon River tributary communities, such as Shageluk and Venetie, may operate or share in the operation of fish camps along the mainstem Yukon River (Figure 1). Subsistence salmon harvested for human consumption are commonly dried, smoked, canned, or frozen.

There is usually little wastage of fish taken for subsistence purposes, although poor weather conditions may cause some fish to spoil during processing and some fish are lost to disease (e.g. *Ichthyophonus*) or scavengers. Households may harvest additional salmon to make up for lost fish or be unable to meet subsistence needs if salmon were lost after the fishing season. Generally, the number of salmon lost each year is less than 2% of the total salmon harvest.

In addition to human consumption, salmon are fed to dogs, which are used for recreation, transportation, and as haul animals. Small Chinook (jacks), summer chum, fall chum, and coho salmon are primarily harvested to feed dogs in the Upper Yukon Area (Andersen and Scott 2010). Most of the subsistence salmon used for dog food are dried summer chum salmon or "cribbed" (frozen in the open air) fall chum and coho salmon. The practice of keeping sled dogs is more common in the Upper Yukon Area than in the Lower Yukon Area. During the active fishing season, households in all areas feed scraps from salmon processing to dogs. Relatively few whole fresh salmon are fed to dogs in the Lower Yukon Area, but, due to the larger numbers of dogs in the Upper Yukon Area, harvesting salmon for dogs throughout the summer is more common. A gradual reduction in the need for salmon as dog food began around 1930, when airplanes began replacing sled dogs as the primary mail and supply carrier. This decline accelerated in the 1960s with the introduction of snow machines to Interior Alaska (Andersen and Scott 2010). Beginning in the early 1980s, there was a renewed interest in recreational use and racing of sled dogs, and the number of subsistence salmon harvested for dog food increased. However, from 1991 to present day there has been a decline in the number of households with dog teams (Andersen and Scott 2010). The decline is due in part to poor chum salmon runs from 1998 to 2002 combined with the steep rise in cost of equipment (boat, motor, nets, fuel) needed to harvest fish for dog food.

Subsistence and personal use fishermen in the Yukon Area primarily use drift gillnets, set gillnets, and fish wheels to harvest salmon. Set gillnets are used throughout the Yukon Area, whereas under state regulations, drift gillnets are only allowed from the mouth of the Yukon River to approximately 18 miles below the community of Galena (River Mile 530) to harvest salmon (Alaska Administrative Code (AAC) 5 AAC 01.220 and 5 AAC 77.717 Lawful Gear). Drift gillnets are allowed under federal permits in Subdistricts 4-B and 4-C, near the communities of Galena and Ruby (Figure 1). These drift areas are only open for a portion of the summer during regulatory openings. Although fish wheels are a legal gear type for subsistence fishing throughout the drainage, they are essentially used only in the Upper Yukon Area. Water conditions and fishing locations are more suitable for the operation of fish wheels in the Upper Yukon Area, which also contains a better supply of logs and young spruce trees used for fish wheel construction.

Portions of the Yukon Area are open for commercial fishing and residents may participate in both commercial and subsistence salmon fisheries. In some areas, subsistence fishing is separated from

commercial fishing by closures before, during, and after commercial periods, while in other areas subsistence and commercial fishing may occur concurrently. Separation of fishing times allows for better enforcement of commercial regulations and management of the fisheries. Salmon or their eggs harvested during subsistence openings cannot be legally bought or sold under the State of Alaska regulations, but commercially harvested salmon may be retained for subsistence use.

Subsistence fishermen are not required to have a fishing permit in most of the Yukon River drainage. However, permits are required for subsistence or personal use fishing in the Tanana River and parts of the Yukon River that are accessible by road (Figure 1). In the communities along the Yukon River covered by the survey, the selected households harvests are used to estimate subsistence harvests for the entire community including unsurveyed households. Fishermen in permit areas are required as a condition of their permit to submit harvest records, and their reports are not expanded to estimate harvest from those that do not return permits. Fishermen in permit areas are also more likely to be from other areas of the state and not reside in communities within permit areas, making a household survey ineffective.

A personal use fishery was implemented in 1986 and currently takes place in the Fairbanks Nonsubsistence Area (Figure 2). The nonsubsistence area was established in 1992 (Appendix C) due to the potential heavy demand urban fishermen could place on the resource. In the nonsubsistence area, fishermen must possess a personal use household permit and a resident sport fish license. State regulations dictate that personal use fishing has a lower priority than subsistence fishing similar to that of commercial and sport fisheries. The personal use fishery has a fishery limit of 750 Chinook and 5,000 chum salmon taken through August 15, and 5,200 chum and coho salmon combined taken after August 16. Fishermen within a portion of Subdistrict 6-B and all of Subdistrict 6-C were required to call in their catch on a weekly basis for inseason fishery management purposes.

Annual documentation of the subsistence salmon harvest (Appendices A1–A4) is used in conjunction with commercial, sport, and personal use harvests, and escapement estimates to calculate total run size. Harvest and escapement information combined with age composition are used to construct brood tables and estimate the number of returning offspring per spawner for some stocks, and these data are also used for forecasting and providing outlooks for the coming season. Subsistence harvest estimates provide a historic record of harvest and trends. Since 1961, the Alaska Department of Fish and Game (ADF&G) has collected information on subsistence salmon harvest and use in the Yukon Area (ADF&G 2002). The primary method of estimating harvest is the annual postseason subsistence salmon harvest survey. Using a combination of survey and permit information, this report documents the estimated subsistence and personal use harvests within the Alaska portion of the Yukon River drainage. State regulations dictate that subsistence is the highest priority use of salmon and subsistence is a primary consideration in fishery management actions.

OBJECTIVES

The objectives of the study included the following.

1. Update community household lists to provide the basis for stratified random sampling of fishing and non-fishing households sufficient to support community harvest estimates, and estimate the number of people in each surveyed community.

2. Estimate the number of salmon and nonsalmon fish species harvested for subsistence in the Yukon Area, by community, using household surveys, harvest documented on subsistence and personal use permits, commercial fisheries reports of salmon taken but not sold, and counts of salmon given to communities from test fish projects.
3. Estimate the number of salmon harvested from each fishing district and subdistrict in the Yukon Area.
4. Document gear types used by Yukon Area subsistence and personal use fishermen, and the percentage of Chinook salmon harvested by gear types in 2010.
5. Determine relative percent success of households in meeting subsistence salmon needs.
6. Document the number of dogs within Yukon Area communities and salmon fed to dogs.

In addition, the investigators documented comments and concerns conveyed by subsistence users during household surveys.

METHODS

DEFINITION OF SUBSISTENCE AND PERSONAL USE HARVEST

Total subsistence and personal use harvest in the Alaska portion of the Yukon River drainage includes fish harvested for direct personal or family consumption (Appendix C), fish distributed to individuals from various test fisheries, and "commercial related" fish commercially taken but not sold and retained for subsistence and personal use. Salmon that have been sold commercially and then returned to fishermen by the buyer/processor, such as carcasses with un-marketable flesh or left over from roe fisheries, are not added to household harvest totals.

HARVEST SURVEY INSTRUMENTS

Total number of salmon harvested for subsistence and personal use fisheries was estimated using the permit programs, harvest calendars and postcards, and the household surveys. District 5 contains both survey and permit areas (Figure 1). The household survey is used to estimate subsistence harvest from Stevens Village; permits are used to supplement incomplete survey data from Stevens Village residents. In unsurveyed District 5 communities (Rampart, Circle, Central, Eagle) unexpanded permit information was used to assess harvest.

Permit Program

In communities along the entire Tanana River drainage (District 6) and where the Yukon River is accessible by the Alaska Highway road system (portions of District 5), households must obtain subsistence or personal use fishing permits issued at the ADF&G offices in Fairbanks, Delta Junction, and Tok. In addition, permit applications for the current season were mailed to all fishermen who returned their permits from the previous season. For residents of communities outside the Fairbanks area, subsistence permit applications were mailed with a postage paid return envelope and dates a department representative would visit their community. In 2010, permit issuing trips were conducted in the communities of Central, Circle, Delta Junction, Dot Lake, Manley Hot Springs, Minto, Nenana, Northway, Rampart, Tanacross, and Tok (Figure 1). Permits were also issued by ADF&G staff stationed at the Eagle sonar project.

Permit holders were required to keep a record of their daily fish harvest on the permit and return it to ADF&G within 10 days of the expiration date (October 15 for salmon and December 31 for

nonsalmon permits). Households that did not report their harvest were mailed up to 2 reminder letters. Additionally, households that did not respond to the reminder letters were contacted by telephone.

Harvests of permit communities were estimated by summing harvests of all permit holders who returned their permit, returned a completed reminder letter, or verbally reported their harvest information. These results were not expanded to estimate harvest by permit holders who did not return their permits. Commercially harvested salmon reported as taken but not sold on fish tickets from permit areas were added to the community where the harvest occurred (Table 1).

Stevens Village is uniquely situated just outside the boundary of a permit area on the Yukon River. Many residents acquire a permit to fish between the Haul Road Bridge and the boundary downstream of the community; however, most residents fish outside of the permit area. Consequently, harvest from Stevens Village is estimated by using both returned permits and the household survey. Information from Stevens Village permits is reported in permit tables and is not added to the subsistence harvest estimates. The overlap between subsistence and permit areas can occasionally cause inconsistencies between numbers reported on survey and permit tables. In these instances, readers should be attentive of footnotes accounting for differences.

Fishermen in the community of Eagle were asked to note on their permit how many salmon were harvested above and below the Eagle sonar project located near the community of Eagle in the permit area of Subdistrict 5-D (Figure 1). Follow-up phone calls were made to fishermen postseason to verify gear types and locations of harvest by species.

Subsistence Harvest Calendars and Postcards

Prior to the salmon fishing season, subsistence harvest calendars were distributed to households in surveyed communities from the Coastal District, Districts 1–4, and a portion of District 5. Calendars, in which fishermen record their daily salmon harvest by species, were primarily used to help fishermen remember their harvest numbers and provide information on timing of subsistence harvests by species.

In May 2010, 1,483 calendars (913 to Lower Yukon Area and 570 to Upper Yukon Area) were mailed to all households except those in the *Do Not Fish* category. Calendars were also mailed to households with a history of subsistence fishing in the community of Rampart, and extra calendars were available upon request. In an effort to increase the number of calendars returned during community surveys, fliers were sent to community post offices, stores, schools, or city offices to remind fishermen to have their harvest calendars available for the surveyors. Everyone who returned a properly completed 2010 harvest calendar before January 1, 2011, became eligible to win one of six $100 lottery prizes.

Households were asked to record their Arctic lamprey *Lampetra camtschatica* harvest taken from October to December 2009. In November 2009, 668 postcards were mailed to every household in the communities of Mountain Village, Pitkas Point, St. Mary's, Pilot Station, Marshall, Russian Mission, Holy Cross, Anvik, and Grayling for fishermen to record their subsistence and commercial Arctic lamprey harvests (Figure 3). The 2010 nonsalmon portion of the survey asked about Arctic lamprey harvested in the previous winter, because harvest usually occurs after fishermen in the communities are interviewed.

HOUSEHOLD SUBSISTENCE SURVEYS

Survey Design

The primary objective of the subsistence household survey is to estimate the total number of salmon harvested for subsistence and personal use by each community. The survey was based on stratified random sample design (Cochran 1977). In this design, the household within a community was the primary sampling unit; households were stratified into 5 groups based on the level of harvest and the level of survey coverage was designated for each group. A household generally consists of one or more people living together in a dwelling and sharing the same phone and mailing address. Multiple generations living in one dwelling would be considered one household. Individuals living in detached but physically related structures were considered part of a household if they participated as a unit in harvesting, processing and distributing resources and shared contact information.

1. *Unknown:* Unknown harvest level. Survey coverage 100%.
2. *Do Not Fish:* Households that do not harvest salmon. Survey coverage 30%.
3. *Light Harvester:* 1–100 total salmon harvest. Survey coverage 30%.
4. *Medium Harvester:* 101–500 total salmon harvest. Survey coverage 100%.
5. *Heavy Harvester*: >500 total salmon harvest. Survey coverage 100%.

Sampling of the Light Harvester and Do Not Fish groups was increased to 50% in Emmonak, Holy Cross, Pilot Station, and Tanana to improve the precision of harvest estimates in these larger communities. When any stratum contained 5 or fewer households, the sample size was made equal to the stratum size (i.e. 100% coverage). In communities with less than 40 households, all households were selected to be surveyed (100% coverage). The harvest level of each household was determined based on the most recent 2 year harvest average from the previous 5 years. Total salmon harvest included Chinook, summer chum, fall chum, and coho salmon, and did not include pink or sockeye salmon. When 2 recent years of harvest data were unavailable, such as from new households, or households that have not participated in the survey, the household's harvest group designation was not updated.

A harvesting household was defined as a household that participated in subsistence fishing activities, such as harvesting or processing fish. The number of fish harvested by a fishing household was defined as the number of fish harvested or processed by the household for subsistence purposes. During the interview, a fishing household was identified by the question (Figure 4, survey question 3): "Did anyone in your household harvest salmon for subsistence use OR keep fish for subsistence use from commercial fishing?" The surveyor was instructed to clarify that "harvest" meant any participation in the subsistence fishery, such as cutting fish. Frequently, several households fish together at a fish camp as a group, not only for themselves, but also for other nonfishing households (e.g., their parents or relatives). Some households harvest salmon, while some only process the catch (i.e., clean, cut, dry, smoke). In these cases, fish brought home by each participating household (from either fishery) were considered fish harvested by the household.

Household Updates

A list of the Yukon Area households (*families* database) was updated annually using the previous years' survey information. Prior to the community survey, the list was further updated by contacting knowledgeable individuals in each community. Community census lists, telephone

and utility lists, and the Alaska Permanent Fund Dividend application list were also used in creating and maintaining the *families* database. Households that lived outside of the survey areas but traveled to the Yukon River to fish in or near a surveyed community were included on the household list in the community nearest their fishing location.

Since 2004, Subsistence Assistants (residents with local knowledge) have been employed by the Yukon River Drainage Fisheries Association (YRDFA) to assist with annually reviewing and updating the household list and community maps as well as acting as a guide within the communities. In a few cases, Subsistence Assistants served as translators, but they did not conduct interviews. When assistants were unavailable, surveyors worked with other sources of local information such as tribal administrators or school principals to aid in community navigation. In some communities, more than one assistant was hired to work with each surveyor, or to complete the surveys if the first assistant was unavailable for the whole visit.

Household Survey Questionnaire

To keep data comparable between years, the subsistence survey questions (Figure 4) have generally remained consistent from year to year. Questions included total number of salmon harvested by the household (questions 5 and 7), whether the household commercial fished and if any of their subsistence harvest was retained from commercial fishing (question 9), number of salmon kept by the household (question 12), fishing gear types used to harvest salmon (question 8), gear types used to harvest Chinook salmon (question 8A), and area fished (question 7).

To determine distribution of salmon within a community, the survey addresses the number of households that fished together (question 6), total number of the group's catch (question 5), the number of salmon given to other families outside the group (question 11), the number of salmon received from other households, from commercial harvest, or from a test fishery project (question 13), and the number of salmon harvested for dog food (questions 18, 19, 20).

Households were asked to assess at what level their subsistence salmon needs were met for each species (Figure 4, question 14). Needs met was calculated by comparing the number of salmon harvested or received to the number that the household said they usually harvested or received. Comments were also recorded by surveyors to identify factors such as lack of fishing equipment or bad weather that affected a household's ability to meet its needs, and to identify whether a household normally harvested or used a species, as opposed to those who did not harvest a particular species. The response, "usually get zero", could indicate that the species was not traditionally fished in a particular area due to species distribution, personal preference, or that some individuals in a household were allergic to the species. If a household lost part of its subsistence catch (question 10), the surveyor asked about the reason for loss and verified that the lost fish were included in the harvest estimates.

Households were also asked about their harvest of miscellaneous fish species (question 15) and pink and sockeye salmon. Miscellaneous species include large whitefish over 4 pounds and small whitefish species less than 4 pounds *(Coregonus spp. and Prosopium cylindraceum),* sheefish *(Stenodus leucichthys),* burbot *(Lota lota),* northern pike *(Esox lucius),* Alaska blackfish *(Dallia pectoralis),* Arctic grayling *(Thymallus arcticus),* longnose sucker *(Catostomus catostomus),* Arctic char *(Salvelinus alpinus),* Arctic lamprey *(Lampetra camtschatica)* and saffron cod *(Eleginus gracilis).* For species that are commonly harvested in the winter and spring, households were asked about their harvest of that species throughout the previous winter, from the date of the previous year's survey to the current year's survey.

Household Survey

Before conducting the survey, surveyors were trained in interviewing techniques, including learning the local names of salmon species and various ways to obtain the number of fish harvested. The surveyors were also briefed on current fishery issues and management actions related to the subsistence and commercial salmon fishing season. Surveyors were trained to ask questions consistently and foster a cooperative atmosphere so that interviewed household members were able to recall as accurately as possible their household harvest and use, and share any fishery related knowledge and concerns pertinent to the survey outcome.

Household surveys were conducted in September and October when the majority of salmon fishing activities had ended and fishermen could more easily recall their harvest numbers. In 2010, a total of 1,221 households were selected to be surveyed in 33 communities. A total of 31 Subsistence Assistants were hired in 27 communities. Surveyors attempted to contact all selected households, and they noted households that were unavailable during the community visit to follow-up with later by phone or letter. After the interview was completed, survey participants were given a small token of appreciation (reusable shopping bag or pen) for participating in the survey.

After the household surveys were conducted, survey forms were edited for clarity and completion. Households were called back when further clarification was needed or to reconcile conflicting information among households that harvested or shared salmon with each other. When fishermen reported amounts in alternative terms, such as the number of 5 gallon buckets, quart sized bags, gunny sacks, or pounds, a conversion sheet based on local approximate measures was used to estimate number of fish harvested. Calculations were made when the surveys were edited prior to database entry.

DATA ANALYSIS AND ESTIMATION METHODS

Classical stratified random sampling methods (Cochran 1977) were used to estimate the average and total number of fish caught by each of the 5 harvest groups in each surveyed Yukon Area community.

The methods described below were used to make estimations of the following: 1) the number of people in a community (Figure 4, question 2), 2) the number of subsistence salmon harvested (question 7), 3) the number of salmon given away (question 11), 4) the number of salmon used for subsistence (question 12), 5) the number of dogs (question 17) in a community, 6) the number of salmon retained for dog food (question 20), 7) the number of salmon usually harvested (question 14), and 8) the number of nonsalmon fish harvested (question 15), including large and small whitefish, sheefish, and northern pike. The number harvested of other miscellaneous fish species and sockeye salmon are as reported and are not estimated.

Denote that:

N_{kj} = the number of households in the jth (j = 1 … 5) harvest group of the kth community

n_{kj} = the number of sampled households in the jth harvest group

y_{kji} = response (e.g., the number of fish harvested) of ith sampled household (i = 1 … n_{kj})

Mean response of the jth harvest group ($\bar{y}_{kj}$) was calculated as:

$$\bar{y}_{kj} = \frac{\sum_i y_{kji}}{n_{kj}} \quad ; \tag{1}$$

and its standard error (SE_{kj}) was calculated as:

$$SE_{kj} = \sqrt{\frac{s_{kj}^2}{n_{kj}}\left(\frac{N_{kj} - n_{kj}}{N_{kj}}\right)} \text{ where } s_{kj}^2 = \hat{V}(y_{kj}) = \frac{\sum_j \left(y_{kji} - \bar{y}_{kj}\right)^2}{n_{kj} - 1} \quad . \tag{2}$$

The estimate of total responses of the *k*th community ($\hat{T}_k$) was calculated as:

$$\hat{T}_k = \sum_{j=1}^{5} N_{kj} \bar{y}_{kj} \quad ; \tag{3}$$

and its 95% confidence interval (95%CI$_k$) was calculated as:

$$95\%\text{CI}_k = t_{(0.025, df = n_k - 1)} \cdot \sqrt{\hat{V}(T_k)} \text{ where } \hat{V}(T_k) = \sum_{j=1}^{5} N_{kj}^2 \left(\frac{N_{kj} - n_{kj}}{N_{kj}}\right)\left(\frac{s_{kj}^2}{n_{kj}}\right). \tag{4}$$

Because estimates of the responses in each community were independent and mutually exclusive, the estimate of survey wide total ($\hat{T}$) was calculated as:

$$\hat{T} = \sum_{k=1} \hat{T}_k \tag{5}$$

and its 95% confidence interval (95%CI) was calculated as:

$$95\%\text{CI} = t_{(0.025, df = n - 1)} \cdot \sqrt{\hat{V}(\hat{T})} \text{ where } \hat{V}(\hat{T}) = \sum_{k=1} \hat{V}(\hat{T}_k) . \tag{6}$$

The number of fish harvested at each fishing area within a community (question 7) was estimated as follows.

Denote that:

y_{kjih} = number of fish harvested at the *h*th fishing location by *i*th household in the *j*th harvest group of the *k*th community.

Proportion of salmon harvested at *h*th fishing area by *j*th group was estimated as:

$$\hat{p}_{kjh} = \frac{\sum_i y_{kjih}}{\sum_i \sum_h y_{kjih}} \quad . \tag{7}$$

The number of salmon harvested at the *h*th fishing area at the *k*th community was calculated as:

$$\hat{T}_{kh} = \sum_{j} N_{kj} \bar{y}_{kj} \hat{p}_{kjh} \quad (8)$$

where $\bar{y}_{kj}$ is mean harvest of the *j*th use group and N_{kj} is the number of *j*th group households.

Total number of salmon harvested at the *h*th fishing area was estimated as:

$$\hat{T}_{h} = \sum_{k} \hat{T}_{kh} \quad . \quad (9)$$

For estimation of the number of; subsistence fishing households (question 3), households that own dogs, and households that feed salmon to dogs (questions 17, 18), the following expansion method was used:

Proportion of households who subsistence fish or own dogs or feed salmon to dogs in the *j*th harvest group of the *k*th community ($\hat{p}_{kj}$) was calculated as:

$$\hat{p}_{kj(s)} = \frac{n_{kj(s)}}{n_{kj}} \quad , \quad (10)$$

where $n_{kj(s)}$ = the number of sample households that subsistence fish or own dogs or feed salmon to dogs

Estimated number of households that subsistence fish or own dogs or feed salmon to dogs in the *k*th community ($\hat{N}_{k(s)}$) was calculated as:

$$\hat{N}_{k(s)} = \sum_{j=1}^{5} N_{kj} \hat{p}_{kj(s)} \quad ; \quad (11)$$

and its 95% confidence interval (95%CI$_k$) was calculated as:

$$95\%\mathrm{CI}_k = t_{(0.025, df=n-1)} \cdot \sqrt{\hat{V}(\hat{N}_{k(s)})} \text{ where } \hat{V}(\hat{N}_{k(s)}) = \sum_{j=1}^{5} N_{kj}^2 \left(\frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left(\frac{\hat{p}_{kj(s)}(1 - \hat{p}_{kj(s)})}{n_{kj} - 1} \right) . \quad (12)$$

Estimated number of households that subsistence fish or own dogs or feed salmon to dogs in the survey wide total ($\hat{T}_{(s)}$) was calculated as:

$$\hat{N}_{(s)} = \sum_{k} \hat{N}_{k} \quad ; \quad (13)$$

and its 95% confidence interval (95%CI) was calculated as:

$$95\%\mathrm{CI} = t_{(0.025, df=n-1)} \cdot \sqrt{\hat{V}(\hat{N}_{(s)})} \text{ where } \hat{V}(\hat{N}_{(s)}) = \sum_{k=1} \hat{V}(\hat{N}_{k(s)}) . \quad (14)$$

The number of subsistence fishing households using a particular gear type was estimated as follows:

Proportion of subsistence fishing households using *h*th gear was calculated as:

$$\hat{q}_{kjh} = \frac{n_{kjh}}{n_{kj(s)}}, \tag{15}$$

where n_{kjh} = the number of sample households that used the *h*th fishing gear.

The number of fishing households using the *h*th fishing gear in the *k*th community ($\hat{N}_{kh}$) was calculated as:

$$\hat{N}_{kh} = \sum_j N_{kj} \hat{p}_{kj} \hat{q}_{kjh}, \tag{16}$$

where $\hat{p}_{kj(s)}$ = the proportion of fishing household in the *j*th harvest group of the *k*th community.

For the number of Chinook salmon harvested by gear types (question 8A), the proportion of Chinook salmon harvested by gear type *h* by each household was estimated as follows.

Proportion of Chinook salmon harvested by the *h*th fishing gear by *j*th group was estimated as:

$$\hat{p}_{kjh} = \frac{\sum_i y_{kjih}}{\sum_i \sum_h y_{kjih}}, \tag{17}$$

and its variance was calculated as

$$V(\hat{p}_{kjh}) = \frac{\hat{p}_{kjh} \cdot (1 - \hat{p}_{kjh})}{\sum_i \sum_h y_{kjih} - 1}. \tag{18}$$

The number of Chinook salmon harvested by the *h*th fishing gear by *j*th group at the *k*th community was calculated as:

$$\hat{\bar{y}}_{kjh} = \bar{y}_{kj} \hat{p}_{kjh} \tag{19}$$

where $\bar{y}_{kj}$ is mean harvest of the *j*th use group, and its variance was calculated as:

$$V(\hat{\bar{y}}_{kjh}) = (\bar{y}_{kj})^2 V(\hat{p}_{kjh}) + (\hat{p}_{kjh})^2 V(y_{kj}) - V(\hat{p}_{kjh}) V(y_{kj}). \tag{20}$$

Total number of Chinook salmon harvested by each gear type was calculated using equations 2–6.

Reported harvests of other miscellaneous fish species were not expanded because of limited harvest information. Harvest groups stratified for salmon are not adequate to estimate species captured with different harvest methods and at different times of year. Those fish species include Arctic grayling, Arctic char, Alaska blackfish, burbot, Arctic lamprey, longnose sucker, saffron cod. Unlike harvest of the targeted salmon species, the sockeye salmon harvest was also not expanded to estimate the harvest of households that were not surveyed. Sockeye salmon are caught infrequently in the lower and middle Yukon River drainage, but they are included on the survey because some fishermen have consistently reported incidental catches of sockeye salmon. The number of sockeye salmon harvested was typically too low to support stratified estimates, therefore only limited information about the harvest and utilization of sockeye salmon was obtained.

RESULTS

OVERALL ESTIMATION OF HARVEST

An estimated 44,721 Chinook, 88,692 summer chum, 71,854 fall chum, and 14,107 coho salmon were harvested for subsistence by 1,504 households in the Yukon Area (Table 1). The total number of salmon harvested includes estimated postseason surveys results, reported harvest from returned permits (subsistence and personal use), salmon reported as distributed to communities from test fish projects and salmon reported on fish tickets in District 6 as retained from commercial fisheries. Reported harvests from Steven's Village permits are not included in the total harvest. Salmon retained from commercial fishing in surveyed communities are included in subsistence survey harvest estimates for each community. The number of fishing households does not include households that were issued non-salmon permits for pike in the Tolovana River.

The total number of salmon caught in subsistence fisheries was 214,622 salmon; consisting of 44,559 Chinook, 88,373 summer chum, 68,645 fall chum, and 13,045 coho salmon (Figure 5, Appendices B1–B4). This does not include harvests from personal use salmon permits which were issued in the Fairbanks Nonsubsistence Area (Figure 2). On average (1996–2009) Chinook salmon compromise 22% of the total subsistence harvest, summer chum 40%, fall chum 29%, and coho salmon 9% (Figure 5).

Test fish projects provided 2,959 Chinook, 4,951 summer chum, 2,238 fall chum, and 558 coho salmon to households for subsistence use, including 4 Chinook salmon given to residents in the community of Eagle (Table 1, Appendix A5). The primary gear types used by households for subsistence and personal use salmon fishing throughout the Yukon Area were set gillnets (48%), drift gillnets (45%), fish wheels (6%) and other (1%) (Table 1). An estimated 225 households reported feeding subsistence caught salmon to their dogs (Tables 2 and 3). Surveyed and permit households throughout the Yukon Area retained an estimated 60,949 salmon for dog food from subsistence harvests (Tables 3 and 4; Appendix B9).

SUBSISTENCE SURVEYS

Surveyors traveled to 32 Yukon Area communities between September 8 and November 1, 2010, and contacted 859 households in person. Surveys for 67 households were collected by telephone, and information from 33 households was collected from surveys or calendars returned by mail. Due to its small size and difficulties in scheduling travel, the community of Birch Creek was surveyed by phone and letter in 2010. An additional 19 unselected households from 14 communities were surveyed, either as new households, unselected households that requested to be surveyed, or households that were misidentified as selected. The number of additional surveys was small and not

statistically significant in regards to the stratified household selection; therefore their responses were entered along with the selected households responses. Overall, a total of 959 households were surveyed (Table 5), which represented 79% of households initially selected for the survey. Of the 2,528 total households identified in the survey area, an estimated 1,278 households (51%) participated in the 2010 subsistence fishery (Table 6). The estimated total population in surveyed communities was 9,985 people (Table 7).

An estimated 36,469 Chinook, 82,206 summer chum, 37,404 fall chum, and 6,741 coho salmon were harvested in the surveyed communities (Table 1). Districts with the largest catches of subsistence salmon were District 4, harvesting 12,888 Chinook salmon; District 1 harvesting 22,520 summer chum salmon; District 5 harvesting 26,722 fall chum salmon; and District 5 harvesting 3,413 coho salmon (Tables 8–11).

Eight communities received a total of 10,702 salmon from test fish projects (Appendix A5). Harvest from surveyed communities (Table 1) included an estimated 23 Chinook, 355 summer chum, 16 fall chum, and 6 coho salmon retained from commercial periods.

The combined total estimated harvest of other subsistence fish including pink salmon, whitefish, northern pike, and sheefish in the Yukon Area was 77,723 fish. Of the estimated harvest of 4,199 pink salmon, approximately 59% were harvested in the Coastal District communities of Scammon Bay and Hooper Bay (Table 12).

The reported harvest of other miscellaneous fish species (not expanded) in surveyed communities totaled 88,712 fish (Table 13). Alaska blackfish represented 78% of the reported (not expanded) harvest of miscellaneous fish species by number and were primarily taken in the Lower Yukon Area (Tables 12 and 13, Appendix B10). Alaska blackfish are frequently reported by households in terms of pounds, sacks or buckets and are estimated to be 14 fish per pound. The reported harvest of sockeye salmon was 263 fish (Table 13).

An estimated 1,509 households in surveyed communities in the Yukon Area owned 3,634 dogs (Table 2). Of the households with dogs, 110 households (7%) fed whole fish to dogs (Table 2). Surveyed households indicated dogs were fed an estimated 8,363 summer chum, 23,779 fall chum and 3,089 coho salmon from subsistence harvests (Table 4). No salmon from commercial harvests were fed to dogs in 2010.

A total of 949 salmon (about 0.4% of the total salmon harvest) was reported as lost in the surveyed communities. Lost salmon consisted of 50 Chinook, 522 summer chum, 367 fall chum, and 10 coho salmon. An additional 318 salmon were unsuitable for human consumption but were fed to dogs consisting of; 148 Chinook, and 106 summer chum, 44 fall chum, and 20 coho salmon. Lost salmon are included in household harvest estimates, but are not included in a household's use (Figure 4, question 12), unless they were fed to dogs. Reasons for loss included poor flesh quality, pathogens, scavengers, and unfavorable processing conditions (Appendix A6).

Of the households contacted during the survey, 517 households replied to the 'needs met/usually get' question for Chinook salmon (Figure 4, question 14). Of these households, 61% met less than 50% of their Chinook salmon needs, and 27% met between 75% and 100% of their Chinook salmon needs, based on what they usually harvest or receive. Of the 363 households providing information on summer chum salmon, 56% of households met less than 50% of their needs, and 34% were able to meet 75% or more of their summer chum salmon needs, based on what they usually harvest or receive. Only 133 and 85 households answered the 'needs met/usually get'

question for fall chum and coho salmon respectively. The percentage of households meeting 50% or less of their subsistence needs was 75% for fall chum salmon and 66% for coho salmon, and 22% of households reported meeting 75% or more of their needs for both fall species (Table 14).

Of the 2,528 households in the surveyed communities, households with unknown harvest levels (335 households, 13%) and households that do not harvest salmon (825 households, 37%) made up 46% of households in surveyed communities. Some of these households did harvest salmon in 2010. Just over 54% (1,368 households) were categorized as fishing households. The largest group of known fishing households was Light harvesters (1,022 households, 75% of fishing households). Medium harvesters (308 households, 23%) and Heavy harvester (38 households, 3%) comprised the other 25% of fishing households. The group with the largest proportion of the Chinook salmon harvest was the "light harvesters," comprising 1,022 households, who took an estimated 49% of the total Chinook salmon subsistence harvest. "Light harvesters" also harvested the largest percentage of summer chum salmon with approximately 42% of the total summer chum salmon subsistence harvest (Appendix A2). Heavy harvesters harvested over 60% of the fall chum salmon subsistence harvest (Appendix A3) and approximately 43% of the coho salmon subsistence harvest (Appendix A4), but only about 6% of the Chinook salmon subsistence harvest (Appendix A1).

Of the 479 households that reported harvesting Chinook salmon, 467 (97%) reported the number of Chinook salmon harvested by their gear types. These responses were expanded to obtain estimates of total Chinook salmon harvested by gear types. An estimated 21,517 Chinook salmon (59% of the total) were harvested by drift gillnets, 12,035 (33%) by set gillnets, and 2,917 (8%) by fish wheels. No Chinook salmon were reported as harvested by other gear types such as dip net or hook and line. Six communities (Scammon Bay, Huslia, Hughes, Allakaket, Stevens Village, and Birch Creek) are estimated to harvest 100% of their salmon by set gillnets. Two communities (Pitkas Point and Kaltag) are estimated to harvest 100% of their Chinook salmon by drift gillnets. Fishwheels were only reported as taking Chinook salmon in upper river communities above Subdistrict 4A. Only 2 communities, Ruby and Ft. Yukon, were estimated to harvest more than 50% of their Chinook salmon with fish wheels.

CALENDARS AND POSTCARDS

In 2010, fishermen returned a total of 229 subsistence harvest calendars (approximately 15% of total issued). A total of 206 calendars (90%) documented salmon harvest information. The remaining households that returned harvest calendars in 2010 either indicated they "did not fish" this season (8%) or the calendars were returned blank (2%). The timing and distribution of fishing effort by district and by day is shown based on returned calendars (Figure 6 top panel). More fishing effort is recorded on calendars during the summer season.

Arctic lamprey postcards were mailed to 668 households in November 2009. Cards were returned by 109 households; 35 households indicated they fished for Arctic lamprey with a reported harvest of 1,142 pounds taken for subsistence use and 3,039 pounds taken as commercial harvest in 2009 (Table 15).

SUBSISTENCE PERMITS

In areas that require subsistence fishing permits in District 5 (Yukon River) and District 6 (Tanana River), 433 (94%) of the total subsistence permits issued were returned and 229 households reported participating in salmon and nonsalmon subsistence fisheries. The timing and

distribution of fishing effort by district and by day is shown based on harvest recorded on permits (Figure 6 bottom panel) and shows a decrease in fishing effort between summer and fall salmon runs.

The 2010 permit harvest information was based on permits returned by May 29, 2011 (Table 3). Total subsistence harvests of 5,013 Chinook, 1,236 summer chum, 28,425 fall chum, and 5,606 coho salmon were reported. The total harvest of other fish species included: 2,834 whitefish, 120 sheefish, 42 burbot, 250 northern pike, 104 longnose suckers, and 196 Arctic grayling (Tables 16 and 17).

Four Chinook salmon were distributed to the community of Eagle from the sonar project (Table 1, Appendix A5). Based on subsistence salmon permits (not including Tolovana pike permits which do not require the reporting of dog information), 115 households indicated that they fed salmon to dogs. These households reported retaining 25,718 whole salmon for dog food (Table 3). Primary gear types reported by the 186 households that fished for subsistence salmon included 138 (74%) with set gillnets, 40 (22%) with fish wheels (Table 1) and 8 (4%) households that fished used other gear types. This does not include permits issued for the pike fishery in the Tolovana River that primarily used ice fishing (jigging) gear.

Records from fish tickets indicate that 189 Chinook, 578 fall chum, and 140 coho salmon were retained from commercial fishing in District 6 and were added in the community harvest from Nenana (Table 1). Reporting of incidental harvests on fish tickets was required during commercial/subsistence openings.

PERSONAL USE

In 2010, 73 (97%) of the personal use permits issued were returned (Table 16). Of these, 41 permits reported fishing, including 38 that were issued for salmon and 3 that were issued for nonsalmon species. Personal use permit holders reported harvesting 162 Chinook, 319 summer chum, 3,209 fall chum, 1,062 coho salmon; and 206 whitefish, 1 sheefish, 3 burbot, 7 northern pike, 66 longnose suckers, and 5 Arctic grayling (Tables 16 and 17). Of the 41 households that reported fishing for personal use, primary gear types included 36 households (88%) using set gillnets, 4 households (10%) using fish wheels (10%), and 1 household (2%) using other gear (Table 1).

DISCUSSION

SALMON RUNS AND SUBSISTENCE FISHERIES MANAGEMENT

The 2010 Chinook salmon run was expected to be below average to average, with concern for a low run of Canadian origin fish. Preseason management strategies were developed with input from U.S. Fish and Wildlife Service, fishermen, tribal council representatives, and other stakeholders to prepare for a potentially low run. These strategies included the prospect of subsistence conservation measures that were less severe than the 2009 first pulse closures and promoting voluntary harvest restrictions, such as harvesting other species, spreading harvest over the duration of the run, reducing extended sharing, and keeping Chinook salmon within the community (JTC 2011).

In 2010, the Yukon River breakup in Alakanuk was on May 24, two days later than the 1983–2009 average (NOAA 2011). The regulatory "windowed" fishing schedule began on June 7 in District 1 and was implemented chronologically upriver based on migratory timing as the

summer runs traveled upstream. The windowed fishing schedule consisted of weekly fishing openings and closures that were scheduled for each district at the start of the fishing season. By regulation, the Coastal District, Subdistrict 5-D, and the Innoko, Kantishna and Koyukuk rivers were open to subsistence fishing 7 days a week (Appendix A7).

The windows schedule of fishing openings was implemented by the BOF in 2001 as a response to poor runs and was intended as a conservation measure. The schedule was intended to provide sufficient opportunity for fishermen in each district to catch normal subsistence harvests, but also to distribute the harvest throughout the run and reduce harvest early in the run when there is a much higher level of uncertainty in projecting the total run abundance (ADF&G 2001). The window schedule also reduces the impact on any particular component of the run and spreads subsistence harvest opportunities among subsistence users throughout the drainage.

The first subsistence catches of Chinook salmon were on June 8 in Emmonak and Alakanuk (YRDFA inseason teleconference June 15, 2010), and the first pulse of Chinook salmon was observed in the Lower Yukon Test Fishery on June 16–21 (JTC 2011). Cold, wet weather and periodic high water and debris led many fishermen to reduce harvest on the first pulse of Chinook salmon due to poor processing conditions. The 2010 preliminary total reconstructed Chinook salmon run size was 125,000 (K. Howard, Commercial Fishery Biologist, ADF&G, Anchorage; personal communication). Summer chum salmon passage at Pilot Station sonar was estimated at approximately 1.33 million (JTC 2011), and the overall summer chum salmon run in 2010 was considered average. Initial concerns about the weak fall chum salmon run prompted reductions in subsistence fishing times in late August and early September (Appendix A7).

Fishery management transitions from summer season to fall season on July 16 in District 1. Subsistence fishing efforts are usually light during the transition period from summer to fall season when relatively few chum salmon (both summer and fall stocks) are moving into the river. Inseason projections for fall chum salmon estimated that the run was less than 400,000 fish (JTC 2011). Additional inseason data from upriver projects allowed for relaxation of restrictions in Subdistrict 5-D as assurances of meeting U.S./Canada border passage became clearer. The cumulative estimate of 142,000 coho salmon past Pilot Station was 3% below the historic average of 147,000 coho salmon. The coho salmon run was late, and harvest of coho salmon was impacted by restricted fishing times enacted to protect the weak fall chum salmon run.

COMMERCIAL AND SUBSISTENCE FISHING

In addition to salmon harvested during subsistence openings, commercial fishing households can retain salmon caught during commercial openings for subsistence purposes. During the survey, households are asked if they commercially fished, and if their subsistence harvest numbers include any salmon retained from commercial fishing periods. Income from commercial fishing is often used by households to help pay for the costs associated with subsistence harvesting activities, including fuel and fishing equipment.

Salmon retained from commercial periods are included in the household harvest estimates in surveyed communities. In permit communities, salmon reported on fish tickets as ‘retained but not sold’ are added to community harvests as commercial related salmon (Table 1). When salmon are sold for roe, carcasses returned to the fishermen are not included in their harvest totals, to avoid double counting. There were no roe fisheries in 2010.

In 2010, no directed Chinook salmon commercial fishing occurred in the Yukon River area, compared to the recent 10 year average harvest of 27,298 Chinook salmon (Steve Hayes, Commercial Fisheries Biologist, ADF&G; Anchorage). A total of 9,987 Chinook salmon were incidentally harvested during commercial summer chum salmon openings (JTC 2011). Of these, 115 incidentally caught Chinook salmon were donated by the local processor, Kwik'Pak. The Council of Yukon First Nations in Canada received 70 Chinook salmon, and 45 Chinook salmon were sent to the Gwichyaa Zhee Gwich'in Tribal Government for the Gwich'in Gathering in Ft. Yukon (Jack Schultheis, Kwik'pak Emmonak General Manager, personal communication; Richard Bender, YRDFA intern, Kotlik; personal communication). The remaining incidentally harvested Chinook salmon were retained by households in Districts 1 and 2 and used for subsistence.

Commercial fishing opportunities and market conditions for summer chum salmon were negatively affected by fishing restrictions implemented to reduce Chinook salmon harvest; however the commercial harvest of 232,888 summer chum salmon in the Yukon Area was 193% higher than the 10 year average commercial harvest. Commercial fishing periods occurred in Districts 1, 2, 4A and 6 (Hayes et. al 2011). Abundance of salmon and harvest opportunities does not guarantee adequate numbers of salmon taken for subsistence. In Districts 1 and 2, over 183,000 summer chum salmon were harvested commercially and the subsistence harvests were near the recent 5 year average (Appendix B2), Approximately 59% of households from all harvest groups fished or participated in harvesting salmon in Districts 1 and 2 in 2010 (Table 6). While it appears that large numbers of summer chum salmon were available in Districts 1 and 2, on average, 63% of households reported meeting less than 50% of their needs for this species (Table 14). Analysis of the needs met question does not incorporate harvest group or fishing information, and is based on the 26% of households in Districts 1 and 2 that chose to answer the question (Table 14). More fishing households may have met their needs than nonfishing households that rely on receiving fish.

Due to concerns about the low fall chum run, commercial fishing for fall chum salmon was not allowed, however a small number of fall chum salmon were incidentally harvested during coho salmon directed openings. The 2010 commercial harvest was 2,550 fall chum salmon, about 4% of the recent 10 year average. The commercial harvest of coho salmon was 3,750 coho salmon, about 15% of the recent 10 year average (Estensen and Borba 2010).

SALMON SURVEY AND AMOUNTS NECESSARY FOR SUBSISTENCE

Several inseason and postseason methods were used for evaluating salmon runs and whether fishermen were meeting their subsistence needs. Managers routinely maintained continual communications with fishermen inseason to obtain information on fishing success in communities, as a means of assessing fishery openings and closures. Since 1992, YRDFA has scheduled weekly inseason teleconferences to provide fishermen in the entire Yukon River drainage (including Canada) an opportunity to discuss the ongoing runs with fisheries managers. In addition, during the last decade, the USFWS conducted weekly inseason surveys during the Chinook salmon run in selected communities to help managers understand how the subsistence season was unfolding. The information was used to assess harvest goals, fishing conditions, and quality of subsistence catch through interviews of a subsample of fishermen each week to evaluate progress towards meeting subsistence needs (Gerken 2008; YRDFA 2010).

One method for assessing the relative success of Yukon Area fishermen is to compare the annual drainagewide estimated subsistence harvest to historic averages and to the "amounts (reasonably) necessary for subsistence" (ANS) harvest ranges established by the Alaska Board of Fisheries (BOF) (ADF&G 2001). The ANS levels outlined in regulation 5 AAC 01.236 are 45,500–66,704 Chinook, 83,500–142,192 summer chum, 89,500–167,900 fall chum, and 20,500–51,980 coho salmon (Figures 7–10). The annual harvest amounts used for comparison to ANS ranges include salmon harvests from permits, survey estimates, test fish and retained from commercial fisheries. Salmon harvested in the personal use fishery are not included. Except for the harvest of summer chum salmon, which was within its ANS range, subsistence harvests of each of the other salmon species in 2010 were below their respective ANS ranges.

The ANS represents the historic harvest drainagewide by species and not necessarily the harvest of specific individuals, communities, or sections of the drainage. Coastal communities were included in determining Yukon Area ANS ranges as these communities harvest most of their salmon from Yukon River drainage salmon stocks. ANS is used by the BOF as a metric to determine if reasonable subsistence fishing opportunities were provided. ANS levels were established for Chinook, summer chum, fall chum and coho salmon but not for pink or sockeye salmon (ADF&G 2001). These levels may require periodic adjustments since the ANS cannot account for trends over time, such as changes in fishing patterns due to population shifts or changes in the fisheries.

While comparisons of the annual drainagewide harvest with ANS provides insight into the run strength and relative success of all fishermen, the survey results are unique in breaking down percent needs met by species and community (Table 14), thus they can provide a more detailed understanding of the subsistence harvest and fulfillment of subsistence needs in each community. The data provide a postseason assessment of the season's run strength, as ideally a strong run would be reflected in a strong subsistence harvest. However, it has been observed that approximately 20–30% of households report they were not able to get enough salmon even in years with very good escapement (Borba and Hamner 2001). Harvest of salmon can be highly variable due to factors unrelated to run strength, such as weather and water conditions, mismatch of fishing windows and salmon passage, gas prices or lack of equipment, health issues, work schedules, or salmon lost to various factors. The percentage of households that reported meeting over 50% of their needs met for each species was only above the recent 5 year average for coho salmon (Appendix B11). In general, households reported not meeting their needs for salmon, but had more success than in 2009.

Salmon harvest estimates based on survey results indicated the Chinook salmon subsistence harvest was 6% below the recent 5 year average (2005–2009) and 10% below the previous 5 year average (2000–2004) (Appendix B1; Figure 7). The 2010 summer chum salmon subsistence harvest was 6% below the recent 5 year average and 11% above the previous 5 year average (Appendix B2; Figure 8). The 2010 harvest of fall chum salmon was 21% below the recent 5 year average and 77% above the previous 5 year average (Appendix B3; Figure 9). Coho salmon harvest was nearly 34% below the recent 5 year average and 33% below the previous 5 year average (Appendix B4; Figure 10). Overall, the 2010 Yukon Area subsistence salmon harvest of 214,622 Chinook, summer chum, fall chum and coho salmon combined (Appendices B1–B4) was approximately 13% below the recent 5 year average (2005–2009) of 247,231 fish and 15% above the previous 5 year average (2000–2004). This 10 year period includes years with very

poor harvests and fishing restrictions, such as the closures during the first pulse of Chinook salmon in 2009 and the low returns of fall fish in the 2000 and 2002 seasons.

Pink salmon exhibit a 2 year cycle with years of low (odd year) and high (even year) abundance (Bue et al. 2011); the pink salmon run was expected to be high in 2010. Harvest of pink salmon in 2010 was 38% below the even-year average for 2000–2008 and 5% below the all year (both odd and even-year) average for 2000–2009 (Appendix B8). Although pink salmon are often abundant in the Lower Yukon Area, they are not typically targeted for harvest.

Identifying the harvest and success of individual households is often difficult in a subsistence economy because harvest is frequently shared and accounted for on the level of extended families or fishing groups rather than on the level of individual households. One basic characteristic of subsistence economies is that the majority of households use a resource such as salmon or would like to use salmon, even if the household did not fish (Caroline Brown, Subsistence Division Resource Specialist, ADF&G, Fairbanks; personal communication). Non-fishing households may receive fish throughout the year from friends and relatives. At the time of the survey, it may be hard for these households to assess whether their needs were met because they have not yet received any fish. It may also be difficult to quantify the number of fish a household usually receives, as it is often transferred as processed or cooked salmon, not as whole fish.

If the household fished and caught fewer fish than they usually harvest, then surveyors asked why. ADF&G is especially interested in knowing if there was a fishery-related issue, such as run strength or management actions, that prevented households from meeting their needs. Common reasons for not fishing included work schedules, lack of gear or equipment (e.g. no boat or motor), and poor health. Fuel prices were mentioned by several households as a hardship in 2010. Recorded retail sale prices for gasoline in June of 2010 ranged from $4.60 per gallon in the community of Ruby to $7.50 per gallon in Hughes (DCRA 2010).

The number of responses to the ‘needs met’ question continues to be low. This question was changed in 2009 to ask surveyed households how many salmon they usually get. A household previously saying they met ‘0%’ of their needs could now add information about unmet needs by saying they usually get, for example, one fish or 10 fish. Approximately 45% of contacted households replied with Chinook salmon information in 2010, compared to 84% of contacted households in 2008 that provided responses to the previous version of this question (Appendix B11). The low response rate to this question was likely due to several factors. Prior to 2009, if a household harvested zero fish of a species that they usually fish for, a response of zero percent of needs met was often entered. With the new wording, a household must estimate the number of salmon it usually gets. If no answer was given, the question was left blank. Surveyors often had difficulty getting responses to the “usually get” question format and were instructed to try several alternative questions (“How many would you put up in a good year?” or “How many did you get last year, and was that enough for the winter?” etc.). Reasons for not answering this question included new households without an established harvest pattern, households that had undergone changes in the number of people, households that refused or were unable to provide an estimate, and households that usually receive a highly variable number of fish each year.

Many factors influenced whether subsistence needs were met in 2010, including subsistence windowed schedules implemented in the summer season due to the poor Chinook salmon run, and additional closures beyond the schedule implemented in the fall season due to the weak fall

chum salmon run (Appendix A7). Additionally, some households were impacted by gasoline prices, flooding and loss of gear or time, bad drying weather, water conditions (e.g. water levels, debris), and equipment failure. Over one third (37%) of surveyed households reported they got at least half of the Chinook salmon they usually get. Individual communities ranged from 0% (Hughes, Allakaket, Alatna, and Bettles) to 69% (Anvik) of households meeting at least half of their subsistence needs for Chinook salmon (Table 14). Community success rates do not account for the location (mainstem Yukon vs. tributary) individual households fished. In a tributary community, fishermen may travel to the mainstem Yukon River to fish, however their success data are included with households who fish on the tributary.

Fishermen from some communities fish in multiple districts, subdistricts, or tributaries and may harvest different salmon stocks. Stocks are mixed until they segregate by the left and right bank orientation (e.g. Subdistricts 4-B, 4-C, 5-A and 5-B), or enter tributaries or areas that predominantly have only one salmon species present at a time (e.g. Subdistrict 5-D). Large numbers of summer chum salmon spawn in the Tanana River, and are not available for subsistence harvest above the confluence of the Yukon and Tanana Rivers (Figure 1, Appendix B2). Due to the distribution of their spawning areas and run timing coinciding with the formation of river ice, coho salmon are also only harvested in small amounts above the community of Tanana (Appendix B4).

Every year, a small number of fishermen travel to the Yukon River to fish in or near surveyed communities but are not present in the communities during the fall survey. These households are contacted by phone or mail at their winter residence, and their harvest is included with the community nearest to where they fish. In 2010, this group consisted of 20 households and represents less than 1% of the total number of households. Information on this group is updated when possible but may be difficult to obtain if the household is not well known by residents in the nearby community.

An additional question was added to the survey in 2010 to gain more information about Chinook salmon harvest by gear types (Figure 4, question 8A). During consideration of mesh size regulations by the BOF in 2009, concerns were raised about the number of Chinook salmon harvested by fish wheels. Response rates to the gear question were very high, with 97% of households that harvested Chinook salmon identifying the gear type(s) they used to harvest Chinook salmon. In 2010, an estimated 92% of Chinook salmon were harvested using drift or set gillnets, and 8% of Chinook salmon were harvested using fish wheels.

NONSALMON SPECIES

Harvest of nonsalmon fish species was most likely underestimated by this project. The stratification and harvest estimation system is based on a household's historical "salmon" harvests and may not adequately represent households that fish predominantly for other species. The correlation between the level of salmon harvest and the level of nonsalmon harvest has not been determined. In order to improve the harvest estimates of nonsalmon species, additional strata and sampling designs would need to be identified and developed (Borba and Hamner 1998). Additionally, the survey is timed to occur at the end of salmon fishing season, whereas nonsalmon species are often harvested throughout the fall and during the winter under the ice (Brown et. al., 2005). During the annual survey, households were asked to estimate their harvest of nonsalmon species from the previous 12 months (Figure 4, question 15). The reported harvests in surveyed communities for most nonsalmon species were not expanded. However, catch totals

were expanded for whitefish, sheefish, and northern pike which are often harvested concurrently with salmon.

The winter of 2009–2010 was the third year that postcards were sent to households for the purpose of documenting Arctic lamprey subsistence and commercial harvests (Figure 3). Of the 9 communities that received postcards, 8 reported subsistence or commercial fishing for Arctic lamprey (Table 15). Several fishermen reported that eels (Arctic lamprey) did not run along the bank where they were fishing, were scattered over the width of the river, or that they missed the run. Household surveys were conducted in communities that harvest lamprey in September (Table 1), before Arctic lampreys were harvested later in the year. Arctic lampreys harvested during the winter of 2009 were reported by households during the 2010 survey (Table 13). Methods to estimate community harvests of Arctic Lamprey or to account for differences between reported subsistence harvests have not been developed for either the subsistence survey (Table 13) or the lamprey postcards (Table 15).

Commercial fishing for Arctic lamprey is considered exploratory and experimental due to a lack of information regarding life history and abundance of lamprey in the Yukon River. The harvest is authorized by a Commissioner's permit, as there are no existing State of Alaska regulations for the commercial harvest of Arctic lamprey. Similar permits have been issued for lamprey since 2003, with an allowable total harvest ranging from 5,000 to 44,080 pounds. The reported commercial harvest of Arctic lamprey in 2009 was 15,210 pounds, and was the second highest harvest since the start of the experimental fishery in 2003 when 49,657 pounds were harvested. (E. Newland, Commercial Fishery Biologist, ADF&G, Anchorage; personal communication).

PERMITS AND PERSONAL USE

In 2005, a sonar project was initiated near the community of Eagle (Figure 1) to estimate the number of salmon crossing the U.S./Canada border. Beginning in 2008, permits were issued to fishermen to document harvest occurring below the sonar site, and above the sonar site before the border (Table 16). Salmon harvested above the sonar were subtracted from sonar estimates for Chinook and fall chum salmon when determining the border passage (JTC 2011). Border escapement projections are used by the Department of Fisheries and Oceans when making inseason fishery management decisions in the Canadian portion of the upper Yukon River. The Yukon River Salmon Agreement (Yukon River Panel, yukonriverpanel.com/salmon/publications/yukon-river-salmon-agreement/, Accessed December 2011) contains escapement goals for Chinook and fall chum salmon, however in 2010, Interim Management Escapement Goals were set for both species. These escapement goals were assessed by subtracting U.S. subsistence and Canadian catch above the sonar site from the Eagle sonar passage estimates (JTC 2011).

Personal use permits for salmon and nonsalmon species are only issued for the Fairbanks Nonsubsistence Area (Figure 2). Historically, the personal use salmon fishery was conducted as a subsistence fishery prior to designation of the Fairbanks Nonsubsistence Area (Hayes et al, 2008). In personal use fisheries, salmon may only be used for human consumption or for bait and cannot be fed to dogs (Whitmore et al. 1990). While the reported personal use harvest of fall fish in this area in 2010 was much larger than the 10 year average, harvest in the personal use fishery did not exceed the guideline harvest ranges (Appendix B5).

DOGS

The use of sled dogs along the Yukon River has continued to be a part of the local tradition, along with the traditional practice of feeding salmon to dogs. Salmon retained for dog food is an important component of subsistence harvest, and was found to constitute between 25% and 92% of fish fed to sled dogs among 6 Yukon River communities (Andersen and Scott 2010). Fluctuation in the amount of salmon fed to dogs is likely due to dog owners feeding nonsalmon fish species, meat, or commercial dog food to dogs, especially in years of poor salmon harvest. Chinook salmon are generally not fed to dogs, except for fish that are lost to spoilage or not suitable quality for human consumption or small jacks. The estimated amount of all salmon species (summer and fall chum and coho salmon) fed whole to dogs from surveyed communities and permit areas was 23% lower than the recent 5 year average. The estimated number of fish fed to dogs for each species was lower than the recent 5 year average, 51% lower for summer chum, 19% lower for fall chum, and 17% lower for coho salmon (Appendix B9). The 4% decrease in the number of dogs (Appendix B9) was much smaller than the decrease in the amount of salmon fed to them. This may be a product of the increasing cost of commodities and fuel needed to harvest fish in Yukon Area communities.

SURVEY COMMENTS

The survey provided an opportunity for households to comment to ADF&G on any topic related to fishing they felt was important. The most numerous comments from the survey regarded fishing windows or fishing schedules that restricted openings, resulting in missed opportunity when salmon were running through the local fishing area (93 comments). However, more fishermen commented that 2010 was a good year (63) than a bad year (44).Water and weather conditions (45), equipment problems (28), management and enforcement complaints (21), work schedules (13), and high gas prices (7) were mentioned as contributing to subsistence needs not being met. Other fishermen who commented on management actions were opposed to the change to 7.5 inch mesh (26), and concerned with the use and reliability of Pilot Station sonar project (12). Some households were in favor of the first pulse closure that was implemented in 2009 and of additional conservation measures to protect Chinook salmon (9), and some addressed salmon bycatch in the Bering Sea (14). A few households commented on the poor flesh quality (5), small size (3), or low run of Chinook salmon (3) in 2010. Although several households were happy with ADF&G (5), others wanted more local input in management (3), and more or better distribution of test fish in their community (8). Some fishermen wanted more commercial fishing in the Lower Yukon Area (29) and Upper Yukon Area (1). Fishermen were also asked about fish loss and fish quality; in 2010 nearly 400 summer chum salmon were lost due to rain or bad weather during processing (Appendix A6).

Fishermen commented on wanting to change the specific hours of fishing scheduled for their district, either to allow more fishing time or, specifically, to allow fishing on weekends. The surveyors heard many comments to the effect that fishermen only catch what they need for subsistence and then stop fishing and that subsistence fishing restrictions were unnecessary. For some fishermen, the windows schedule prevented them from catching all their fish at once, which impacted processing and storage of fish. Short openings also stretched out the season, an important consideration when gasoline costs and work schedules limit the number of possible trips to a fish camp. Fishermen commented that by restricting fishing times, the windows schedule reduced the ability of fishermen to adapt to circumstances such as poor weather, water

levels, debris or work schedules; they also expressed concern that it was difficult to know when fishing was open and that greater communication of schedules and management might help.

Overall harvests of Chinook, summer chum and fall chum salmon were higher in 2010 than in 2009, however the coho salmon harvest was 18% lower than 2009. All harvests were lower than their respective 5 year averages (Appendices B1–B4). Poor Chinook and fall chum salmon runs necessitated closures in both the summer and fall seasons and reduced opportunity for fishermen to harvest summer chum and coho salmon. Household harvest information from 2009 was not used when recalculating household use groups for 2010 and should not be used in any future ANS updates. A household's harvest from years with subsistence restrictions may not be indicative of a new use pattern for the household caused by internal factors such as a change in household size, but it may instead have been driven by external factors such as reduced fishing opportunity and adverse conditions.

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TABLES AND FIGURES

Table 1.–Subsistence and personal use salmon harvest estimates, including commercially related and test fish harvests provided for subsistence use, and related information, Yukon Area, 2010.

Community	Survey Date, Permit Area [a]	Number of Fishing Households [b]	Number of Dogs [c]	Estimated Harvest				Primary Gear Used [d]		
				Chinook	Summer Chum	Fall Chum	Coho	Set Gillnet	Drift Gillnet	Fish Wheels
Hooper Bay [e]	9/15-18	120	325	584	17,020	116	45	106	14	0
Scammon Bay	9/14-16	53	85	716	5,405	70	79	53	0	0
Coastal District Total		173	410	1,300	22,425	186	124	159	14	0
Nunam Iqua [f]	9/13-14	22	28	404	2,267	143	73	21	1	0
Alakanuk [e]	9/11-12	86	221	944	7,722	860	449	48	38	0
Emmonak [e]	9/8-10	91	204	2,194	10,918	1,718	362	18	73	0
Kotlik [e]	9/11-13	48	142	2,314	4,265	481	238	24	24	0
District 1 Subtotal		247	595	5,856	25,172	3,202	1,122	111	136	0
Mountain Village [e]	9/20-21	101	165	1,601	7,071	133	127	8	93	0
Pitkas Point	9/21	15	44	580	633	10	116	0	15	0
St. Mary's [e]	9/22-23	88	66	2,800	7,443	387	92	15	73	0
Pilot Station [e]	9/24-26	50	74	1,585	6,196	833	189	8	42	0
Marshall	9/27-29	59	145	2,110	2,395	56	33	1	57	0
District 2 Subtotal		313	494	8,676	23,738	1,419	557	32	280	0
Russian Mission	9/29-30	38	130	924	528	104	300	19	19	0
Holy Cross	9/27-28	34	57	3,098	463	21	0	6	28	0
Shageluk	9/25-9/26	11	48	277	350	1,200	53	6	5	0
District 3 Subtotal		83	235	4,299	1,341	1,325	353	31	52	0
Lower Yukon River Total		643	1,324	18,831	50,251	5,946	2,032	174	468	0
Anvik	9/26-27	17	53	1,069	451	169	28	5	12	0
Grayling	9/24-25	39	95	2,122	1,612	202	132	4	35	0
Kaltag	10/10-11	54	101	3,191	102	658	0	0	54	0
Nulato	10/8-9	57	96	2,989	416	1,049	242	9	48	0
Koyukuk	10/7-8	21	81	867	352	792	254	1	19	0
Galena	10/5-7	60	130	1,357	1,702	1,968	549	26	29	5
Ruby	10/16-17	27	69	1,102	1,971	1,026	148	19	0	8
District 4 Yukon River Subtotal		275	625	12,697	6,606	5,864	1,353	64	197	13
Huslia	10/8	16	186	65	1,349	403	289	16	0	0
Hughes	10/9	5	52	63	878	0	0	5	0	0
Allakaket	10/30-31	22	106	63	2,864	521	88	22	0	0
Alatna	11/1	1	9	0	23	0	0	1	0	0
Bettles	10/28-29	0	12	0	0	0	0	0	0	0
Koyukuk River Subtotal		44	365	191	5,114	924	377	44	0	0
District 4 Subtotal		319	990	12,888	11,720	6,788	1,730	108	197	13

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Table 1.–Page 2 of 3.

Community	Survey Date, Permit Area [a]	Number of Fishing Households [b]	Number of Dogs [c]	Estimated Harvest				Primary Gear Used [d]		
				Chinook	Summer Chum	Fall Chum	Coho	Set Gillnet	Drift Gillnet	Fish Wheels
Tanana	10/14-16	32	229	3,215	1,856	14,984	2,314	25	0	6
Rampart	permits	4	5	262	161	735	24	3	0	1
Fairbanks NSB [g]	permits	52	278	1,670	427	822	2	50	0	2
Stevens Village [h]	10/12, permits	11	87	469	28	2,706	428	9	0	2
Birch Creek	phone	6	9	73	0	0	0	6	0	0
Beaver	10/13	14	42	198	22	37	1	12	0	1
Fort Yukon	10/25-27	61	328	1,683	722	6,006	244	39	0	22
Circle	permits	16	183	324	37	927	164	3	0	13
Central	permits	5	16	90	0	0	0	4	0	1
Eagle [e]	permits	27	228	867	25	15,008	1	19	0	7
Other District 5 [i]	permits	17	28	779	144	120	0	17	0	0
District 5 Yukon River Subtotal		245	1,433	9,630	3,422	41,345	3,178	187	0	55
Venetie	10/14-15	17	198	767	0	2,989	159	17	0	0
Chalkyitsik	10/27-28	1	17	0	133	0	267	0	0	1
Chandalar and Black Rivers Subtotal		18	215	767	133	2,989	426	17	0	1
District 5 Subtotal		263	1,648	10,397	3,555	44,334	3,604	204	0	56
Manley	permits	9	117	337	102	2,696	1,832	7	0	2
Minto	permits	6	84	43	8	70	0	1	0	2
Nenana [j]	permits	18	274	666	85	6,802	2,313	10	0	8
Healy	permits	4	22	2	30	1,068	1,198	3	0	0
Fairbanks NSB [k]	permits	49	122	245	500	3,887	1,274	41	0	8
Other District 6 [l]	permits	20	67	12	16	77	0	16	0	0
District 6 Tanana River Subtotal [j, k]		106	686	1,305	741	14,600	6,617	78	0	20
Upper Yukon River Total		688	3,324	24,590	16,016	65,722	11,951	390	197	89
Survey Village Subtotal		1,277	3,634	36,469	82,206	37,404	6,741	549	679	45
Subsistence Permit Subtotal [m]		186	1,423	4,942	1,216	28,425	5,606	138	0	40
Subsistence Test Fish Subtotal [n]		-	-	2,959	4,951	2,238	558	-	-	-
District 6 Commercial Related [o]		-	-	189	0	578	140	-	-	-
Subsistence Harvests Subtotal		1,463	5,057	44,559	88,373	68,645	13,045	687	679	85
Personal Use Permit Subtotals		41	-	162	319	3,209	1,062	36	0	4
Alaska, Yukon River Total [p,q]		1,331	4,648	43,421	66,267	71,668	13,983	564	665	89
Alaska, Yukon Area Total		1,504	5,058	44,721	88,692	71,854	14,107	723	679	89
AK, Yukon Area Percentages of the Total		-	-	20%	40%	33%	6%	48%	45%	6%

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[a] Data collected by Alaska Department of Fish and Game (ADF&G), Division of Commercial Fisheries. Survey data are expanded for number of fishing households, number of dogs, and harvest. Permit data are unexpanded, and are from all permits received as of May 29, 2011.

[b] Estimated number of households that fished in surveyed communities or number of permit households who reported fishing in permit required areas. Does not include 42 Tolovana River pike permits issued in 2010, except for 1 pike permit reporting a harvest of 1 summer chum.

[c] The number of dogs is based on survey information or from permits issued.

[d] Primary fishing gear used is based on survey information or from subsistence permits issued. Totals for gear and household may not be equal due to a small number of fishermen using unknown or 'Other' gear types. Primary gear information for surveyed communities was expanded in 2010 for households that were not surveyed. Primary gear is determined by the larger number of salmon harvested by gear types in the household.

[e] Includes salmon given to communities from test fisheries.

[f] Formerly known as Sheldon or Sheldon's Point.

[g] Fairbanks North Star Borough (FNSB) households that obtained a permit and indicated they fished in the Yukon River permit required area.

[h] Permit harvest information from Stevens Village residents was used to complement the information obtained by the survey.

[i] "Other District 5" includes residents of Anchorage, Manley, Minto, Nenana, and Wiseman, and the Upper Tanana River drainage community of Tok who obtained a household permit and fished in a Yukon River permit required area.

[j] Includes harvest from the personal use permit area and salmon retained from commercial fishing from households that fished in the Tanana River.

[k] Includes harvest from the personal use permit area in the Tanana River.

[l] "Other District 6" includes residents of the Upper Tanana River drainage communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok, and the communities of Anderson and Eagle River who obtained a permit and fished in the Tanana River.

[m] Subsistence permit subtotal does not include Stevens Village permit information or commercially retained salmon from District 6.

[n] Test fish given away for subsistence use. Residents of Eagle received 4 Chinook salmon from the Eagle sonar project test fishery.

[o] District 6 "Commercial Related" included fish caught during commercial fishing and "not sold" but retained for subsistence use. These salmon are included in the Nenana community harvest.

[p] Does not include Coastal District.

[q] Based on survey estimates, 23 Chinook, 355 summer chum, 16 fall chum, and 6 coho salmon were retained from commercial harvests in Districts 1 and 2. Commercially retained salmon are included in subsistence harvests from surveyed communities.

Table 2.–Estimated number of households with dogs, households that feed fish to dogs, numbers of dogs, and corresponding confidence intervals (CI 95%) for surveyed communities, Yukon Area, 2010.

			Number of Households with Dogs		Number of Households that Feed Fish to Dogs		Number of Dogs	
	Total	Households	Estimated	CI	Estimated	CI	Estimated	CI
Community	Households	Contacted	Total	95%	Total	95%	Total	95%
Hooper Bay	212	68	163	19	4	7	325	91
Scammon Bay	90	30	44	14	0	0	85	28
Coastal District	302	98	207	24	4	7	410	95
Nunam Iqua	37	28	16	2	0	0	28	5
Alakanuk	139	37	88	15	0	0	221	60
Emmonak	169	70	120	13	2	1	204	65
Kotlik	105	35	75	14	0	0	142	78
District 1	450	170	299	24	2	1	595	118
Mountain Village	161	59	95	14	0	0	165	29
Pitkas Point	27	20	23	2	1	0	44	4
St. Mary's	120	46	38	15	2	1	66	16
Pilot Station	111	56	63	9	0	0	74	14
Marshall	73	28	65	8	1	1	145	35
District 2	492	209	284	24	4	1	494	51
Russian Mission	65	19	37	14	6	8	130	44
Holy Cross	60	27	28	8	0	0	57	18
Shageluk	27	18	20	2	1	1	48	11
District 3	152	64	85	16	7	8	235	49
Anvik	28	22	21	2	3	1	53	7
Grayling	45	13	30	12	6	4	95	30
Kaltag	63	20	43	13	0	0	101	50
Nulato	79	23	45	15	1	0	96	32
Koyukuk	41	13	30	9	3	0	81	15
Galena	159	38	66	23	3	1	130	49
Ruby	58	16	23	13	1	0	69	28
Huslia	73	23	66	8	12	0	186	12
Hughes	30	18	9	2	3	2	52	9
Allakaket	58	14	26	11	12	10	106	23
Alatna	8	5	4	2	1	0	9	7
Bettles	28	16	16	1	0	0	12	4
District 4	670	221	379	38	45	11	990	93
Tanana	98	35	41	14	10	1	229	33
Stevens Village	20	13	16	2	3	2	87	26
Birch Creek	16	7	4	4	0	0	9	7
Beaver	29	24	15	2	2	0	42	10
Fort Yukon	197	57	132	23	26	12	328	59
Venetie	81	15	38	13	7	9	198	129
Chalkyitsik	21	17	9	2	0	0	17	4
District 5	462	168	255	31	47	16	910	149
Survey Totals	2,528	930	1,509	66	110	22	3,634	242

Note: The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 3.–Household and dog information reported by subsistence and personal use permits issued and returned, listed by fishery and by community of residence, Yukon Area, 2010.

	Permit Information [a]				Reported Household Information (based on permits issued)					
	Permits [b]		Percent	Numbers of Permits Returned	Number of	Number of	Number of Households	Number of	Number of Households Feeding Whole	Number of Whole Salmon
Subsistence Permits	Issued	Returned	Returned	that Fished [c]	People	Fishermen	with Dogs	Dogs	Salmon to Dogs	Fed to Dogs
Central	7	7	100%	5	15	10	5	16	2	0
Circle	33	30	91%	16	85	60	24	183	14	835
Eagle	34	34	100%	27	84	76	26	228	20	12,662
Rampart	6	5	83%	4	23	22	4	5	2	210
Fairbanks (FNSB) [d]	187	181	97%	100	555	405	69	400	21	4,498
Healy	6	6	100%	4	21	16	3	22	3	927
Manley	18	18	100%	10	42	31	16	119	9	3,707
Minto	48	41	85%	12	152	115	22	89	12	0
Nenana	52	48	92%	18	164	121	32	281	23	2,718
Stevens Village [e]	5	4	80%	1	14	8	3	9	1	0
Upper Tanana Villages [f]	52	45	87%	23	226	100	34	71	4	11
Other Subsistence [g]	15	14	93%	9	39	33	8	16	4	150
Subsistence Permit Subtotal	463	433	94%	229	1,420	997	246	1,439	115	25,718
Personal Use Permits										
Fairbanks (FNSB) [d]	73	71	97%	39	205	138	-	-	-	-
Other Personal Use [h]	2	2	100%	2	4	3	-	-	-	-
Personal Use Permit Subtotal	75	73	97%	41	209	141	-	-	-	-
Permit Totals	538	506	94%	270	1,629	1,138	246	1,439	115	25,718

[a] Permits returned as of March 29, 2011.

[b] Includes 46 households that were "issued" permits for more than one area, one household that was issued a duplicate permit for the same area, and 5 permit holders that were issued an SE and SEU permit to track harvest above and below Eagle sonar.

[c] Includes 9 households that "fished" in 2 different areas and 3 permit holders that fished above and below the Eagle sonar.

[d] Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

[e] Stevens Village is a surveyed community, but many residents fish in permit areas. Therefore this permit information is not included in any final harvest estimates to avoid double counting.

[f] Upper Tanana River communities include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

[g] Includes residents from Anchorage, Anchor Point, Anderson, Denali Park, Eagle River, Galena, Palmer, Tanana, Wasilla, and Wiseman who were issued a subsistence fishing permit for the Yukon, Tanana, Tolovana, Kantishna, and Upper Koyukuk rivers.

[h] Includes residents of Delta Junction and Nenana that applied for a personal use permit.

Table 4.–Estimated number of salmon retained for dog food from subsistence harvests with corresponding confidence intervals (CI 95%) for surveyed communities, Yukon Area, 2010.

			Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon [a]
Community	Total Households	Households Contacted [b]	Estimated Total	CI 95%	Estimated Total	CI 95%	Estimated Total	CI 95%	Estimated Total
Hooper Bay	212	68	118	199	0	0	0	0	118
Scammon Bay	90	30	0	0	0	0	0	0	0
Coastal District	302	98	118	199	0	0	0	0	118
Nunam Iqua	37	28	0	0	0	0	0	0	0
Alakanuk	139	37	0	0	0	0	0	0	0
Emmonak	169	70	20	14	0	0	0	0	20
Kotlik	105	35	0	0	0	0	0	0	0
District 1	450	170	20	14	0	0	0	0	20
Mountain Village	161	59	0	0	0	0	0	0	0
Pitkas Point	27	20	0	0	0	0	104	0	104
St. Mary's	120	46	27	9	0	0	0	0	27
Pilot Station	111	56	0	0	0	0	0	0	0
Marshall	73	27	0	0	0	0	0	0	0
District 2	492	208	27	9	0	0	104	0	131
Russian Mission	65	19	10	17	61	42	183	127	254
Holy Cross	60	27	0	0	0	0	0	0	0
Shageluk	27	18	53	56	0	0	0	0	53
District 3	152	64	63	58	61	42	183	127	307
Anvik	28	22	318	175	0	0	0	0	318
Grayling	45	13	625	38	0	0	0	0	625
Kaltag	63	20	0	0	0	0	0	0	0
Nulato	79	23	0	0	0	0	0	0	0
Koyukuk	41	13	647	0	394	0	0	0	1,041
Galena	159	38	986	299	840	192	382	197	2,208
Ruby	58	16	600	0	600	0	0	0	1,200
Huslia	73	23	959	0	322	0	213	0	1,494
Hughes	30	18	750	0	0	0	0	0	750
Allakaket	58	14	1,209	313	395	0	0	0	1,604
Alatna	8	5	17	0	0	0	0	0	17
Bettles	28	16	0	0	0	0	0	0	0
District 4	670	221	6,111	469	2,551	192	595	197	9,257
Tanana	98	34	1,883	758	12,204	4,606	1,010	499	15,097
Stevens Village	20	13	0	0	2,174	1,781	771	774	2,945
Birch Creek	16	7	0	0	0	0	0	0	0
Beaver	29	24	8	0	33	0	0	0	41
Fort Yukon	197	57	133	131	4,560	1,451	267	261	4,960
Venetie	81	15	0	0	2,196	2,154	159	280	2,355
Chalkyitsik	21	17	0	0	0	0	0	0	0
District 5	462	167	2,024	769	21,167	5,579	2,207	997	25,398
Survey Totals	2,528	928	8,363	925	23,779	5,583	3,089	1,025	35,231

[a] Does not include Chinook salmon that were not fit for human consumption but possibly fed to dogs. No salmon were reported as retained from commercial fisheries and fed to dogs in 2010.

[b] The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 5.–Estimated total number of households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Community Totals			
Community	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C
Hooper Bay	17	2	3.0	150%	69	22	17.0	77%	98	31	27.0	87%	28	28	25.0	89%	-	-	-	-	212	83	72	87%
Scammon Bay	14	0	0.0	-	23	7	5.0	71%	38	10	10.0	100%	15	15	15.0	100%	-	-	-	-	90	32	30	94%
Coastal District	31	2	3.0	150%	92	29	22.0	76%	136	41	37.0	90%	43	43	40.0	93%	-	-	-	-	302	115	102	89%
Nunam Iqua	9	1	3.0	300%	8	8	8.0	100%	10	10	10.0	100%	10	10	7.0	70%	-	-	-	-	37	29	28	97%
Alakanuk	28	2	0.0	0%	32	10	6.0	60%	56	18	14.0	78%	23	23	19.0	83%	-	-	-	-	139	53	39	74%
Emmonak	26	3	1.0	33%	42	21	13.0	62%	68	34	27.0	79%	33	33	31.0	94%	-	-	-	-	169	91	72	79%
Kotlik	16	1	1.0	100%	20	7	6.0	86%	52	16	14.0	88%	17	17	16.0	94%	-	-	-	-	105	41	37	90%
District 1	79	7	5.0	71%	102	46	33.0	72%	186	78	65.0	83%	83	83	73.0	88%	-	-	-	-	450	214	176	82%
Mountain Village	27	0	0.0	-	31	9	8.0	89%	70	23	23.0	100%	32	32	28.0	88%	1	1	1.0	100%	161	65	60	92%
Pitkas Point	1	0	0.0	-	7	7	5.0	71%	14	14	11.0	79%	5	5	5.0	100%	-	-	-	-	27	26	21	81%
St. Mary's	3	0	0.0	-	21	7	5.0	71%	71	20	18.0	90%	25	25	24.0	96%	-	-	-	-	120	52	47	90%
Pilot Station	12	3	1.0	33%	33	17	17.0	100%	50	26	25.0	96%	16	16	14.0	88%	-	-	-	-	111	62	57	92%
Marshall	5	3	1.0	33%	12	4	3.0	75%	42	14	13.0	93%	14	14	12.0	86%	-	-	-	-	73	35	29	83%
District 2	48	6	2.0	33%	104	44	38.0	86%	247	97	90.0	93%	92	92	83.0	90%	1	1	1.0	100%	492	240	214	89%
Russian Mission	4	0	0.0	-	16	5	5.0	100%	37	9	9.0	100%	8	8	7.0	88%	-	-	-	-	65	22	21	95%
Holy Cross	10	2	1.0	50%	12	7	5.0	71%	24	13	9.0	69%	14	14	13.0	93%	-	-	-	-	60	36	28	78%
Shageluk	5	0	2.0	-	5	5	4.0	80%	14	14	11.0	79%	3	3	3.0	100%	-	-	-	-	27	22	20	91%
District 3	19	2	3.0	150%	33	17	14.0	82%	75	36	29.0	81%	25	25	23.0	92%	-	-	-	-	152	80	69	86%
Anvik	2	1	2.0	200%	9	9	6.0	67%	9	9	8.0	89%	6	6	5.0	83%	2	2	1.0	50%	28	27	22	81%
Grayling	3	0	1.0	-	3	2	2.0	100%	33	8	7.0	88%	5	5	2.0	40%	1	1	1.0	100%	45	16	13	81%
Kaltag	2	2	1.0	50%	14	5	3.0	60%	42	14	12.0	86%	5	5	4.0	80%	-	-	-	-	63	26	20	77%
Nulato	1	0	1.0	-	20	6	4.0	67%	55	17	15.0	88%	3	3	3.0	100%	-	-	-	-	79	26	23	88%
Koyukuk	3	2	0.0	0%	15	5	4.0	80%	16	6	4.0	67%	4	4	2.0	50%	3	3	3.0	100%	41	20	13	65%
Galena	10	1	1.0	100%	75	20	15.0	75%	67	20	18.0	90%	6	6	5.0	83%	1	1	1.0	100%	159	48	40	83%
Ruby	6	0	1.0	-	35	12	8.0	67%	14	5	5.0	100%	1	1	1.0	100%	2	2	2.0	100%	58	20	17	85%
Huslia	7	2	1.0	50%	44	15	13.0	87%	15	3	2.0	67%	5	5	5.0	100%	2	2	2.0	100%	73	27	23	85%
Hughes	10	0	0.0	-	11	11	11.0	100%	6	6	4.0	67%	3	3	3.0	100%	-	-	-	-	30	20	18	90%
Allakaket	14	1	1.0	100%	32	10	8.0	80%	7	3	2.0	67%	2	2	1.0	50%	3	3	3.0	100%	58	19	15	79%
Alatna	1	0	0.0	-	5	5	3.0	60%	2	2	2.0	100%	-	-	-	-	-	-	-	-	8	7	5	71%
Bettles	11	2	2.0	100%	16	16	14.0	88%	1	1	0.0	0%	-	-	-	-	-	-	-	-	28	19	16	84%
District 4	70	11	11.0	100%	279	116	91.0	78%	267	94	79.0	84%	40	40	31.0	78%	14	14	13.0	93%	670	275	225	82%

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Table 5.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Community Totals			
Community	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C
Tanana	7	3	2.0	67%	42	20	11.0	55%	30	15	8.0	53%	8	8	6.0	75%	11	11	10.0	91%	98	57	37	65%
Stevens Village	2	1	1.0	100%	4	4	2.0	50%	11	11	8.0	73%	3	3	2.0	67%	-	-	-	-	20	19	13	68%
Birch Creek	2	2	0.0	0%	10	10	5.0	50%	4	4	3.0	75%	-	-	-	-	-	-	-	-	16	16	8	50%
Beaver	3	0	0.0	-	10	10	8.0	80%	11	11	11.0	100%	5	5	5.0	100%	-	-	-	-	29	26	24	92%
Fort Yukon	44	11	6.0	55%	98	29	25.0	86%	37	12	12.0	100%	6	6	5.0	83%	12	12	11.0	92%	197	70	59	84%
Venetie	27	2	1.0	50%	37	11	7.0	64%	14	5	5.0	100%	3	3	2.0	67%	-	-	-	-	81	21	15	71%
Chalkyitsik	3	2	2.0	100%	14	14	12.0	86%	4	4	3.0	75%	-	-	-	-	-	-	-	-	21	20	17	85%
District 5	88	21	12.0	57%	215	98	70.0	71%	111	62	50.0	81%	25	25	20.0	80%	23	23	21.0	91%	462	229	173	76%
Survey Totals	335	49	36.0	73%	825	350	268.0	77%	1,022	408	350.0	86%	308	308	270.0	88%	38	38	35.0	92%	2,528	1,153	959	83%

Note: Total number of households (N), the sample size (n), the number of households contacted (C), and the percent of the sampled households that were contacted (%C) in each harvest group in surveyed communities. Households contacted (C) may include some households not pre-selected resulting in a household contacted percentage (%C) greater than 100%. Dashes indicate indefinable values.

Table 6.–Estimated number of subsistence fishing households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	Total	95%
Hooper Bay	17	3	0.3	0.3	69	17	0.5	0.1	98	27	0.6	0.1	28	25	0.8	0.0	-	-	-	-	212	72	120	24
Scammon Bay	14	0	-	-	23	5	0.4	0.2	38	10	0.6	0.1	15	15	0.9	0.0	-	-	-	-	90	30	53	17
Coastal District	31	3	0.3	0.3	92	22	0.5	0.1	136	37	0.6	0.1	43	40	0.8	0.0	-	-	-	-	302	102	173	29
Nunam Iqua	9	3	0.3	0.3	8	8	0.3	0.0	10	10	0.7	0.0	10	7	1.0	0.0	-	-	-	-	37	28	22	5
Alakanuk	28	0	-	-	32	6	0.5	0.2	56	14	0.6	0.1	23	19	0.7	0.0	-	-	-	-	139	39	86	23
Emmonak	26	1	0.0	-	42	13	0.2	0.1	68	27	0.6	0.1	33	31	0.8	0.0	-	-	-	-	169	72	91	15
Kotlik	16	1	1.0	-	20	6	0.2	0.1	52	14	0.4	0.1	17	16	0.9	0.0	-	-	-	-	105	37	48	16
District 1	79	5	0.3	0.3	102	33	0.3	0.1	186	65	0.6	0.1	83	73	0.8	0.0	-	-	-	-	450	176	247	32
Mountain Village	27	0	-	-	31	8	0.3	0.1	70	23	0.7	0.1	32	28	0.9	0.0	1	1	1.0	-	161	60	101	17
Pitkas Point	1	0	-	-	7	5	0.2	0.1	14	11	0.6	0.1	5	5	0.8	0.0	-	-	-	-	27	21	15	3
St. Mary's	3	0	-	-	21	5	0.2	0.2	71	18	0.8	0.1	25	24	0.9	0.0	-	-	-	-	120	47	88	13
Pilot Station	12	1	0.0	-	33	17	0.1	0.0	50	25	0.6	0.1	16	14	0.8	0.0	-	-	-	-	111	57	50	8
Marshall	5	1	1.0	-	12	3	0.7	0.3	42	12	0.8	0.1	14	12	1.0	0.0	-	-	-	-	73	28	59	11
District 2	48	2	1.0	-	104	38	0.2	0.1	247	89	0.7	0.0	92	83	0.9	0.0	1	1	1.0	-	492	213	313	26
Russian Mission	4	0	-	-	16	5	0.2	0.2	37	9	0.7	0.1	8	7	1.0	0.0	-	-	-	-	65	21	38	12
Holy Cross	10	1	0.0	-	12	5	0.0	0.0	24	9	0.9	0.1	14	13	0.9	0.0	-	-	-	-	60	28	34	4
Shageluk	5	2	0.0	0.0	5	4	0.0	0.0	14	11	0.6	0.1	3	3	0.7	0.0	-	-	-	-	27	20	11	2
District 3	19	3	0.0	0.0	33	14	0.1	0.1	75	29	0.7	0.1	25	23	0.9	0.0	-	-	-	-	152	69	83	13
Anvik	2	2	0.5	0.0	9	6	0.2	0.1	9	8	0.8	0.1	6	5	1.0	0.0	2	1	1.0	-	28	22	17	2
Grayling	3	1	1.0	-	3	2	0.5	0.3	33	7	0.9	0.1	5	2	1.0	0.0	1	1	1.0	-	45	13	39	8
Kaltag	2	1	1.0	-	14	3	0.7	0.3	42	12	0.9	0.1	5	4	0.8	0.1	-	-	-	-	63	20	54	10
Nulato	1	1	1.0	-	20	4	0.5	0.3	55	15	0.8	0.1	3	3	0.7	0.0	-	-	-	-	79	23	57	14
Koyukuk	3	0	-	-	15	4	0.0	0.0	16	4	0.8	0.2	4	2	1.0	0.0	3	3	1.0	0.0	41	13	21	7
Galena	10	1	0.0	-	75	15	0.1	0.1	67	18	0.7	0.1	6	5	1.0	0.0	1	1	1.0	-	159	40	60	15
Ruby	6	1	1.0	-	35	8	0.1	0.1	14	5	1.0	0.0	1	1	1.0	-	2	2	1.0	0.0	58	17	27	8
Huslia	7	1	1.0	-	44	13	0.0	0.0	15	2	0.0	0.0	5	5	1.0	0.0	2	2	0.5	0.0	73	23	16	0
Hughes	10	0	-	-	11	11	0.0	0.0	6	4	0.3	0.1	3	3	0.7	0.0	-	-	-	-	30	18	5	3
Allakaket	14	1	0.0	-	32	8	0.3	0.1	7	2	0.5	0.4	2	1	1.0	-	3	3	1.0	0.0	58	15	22	14
Alatna	1	0	-	-	5	3	0.0	0.0	2	2	0.5	0.0	-	-	-	-	-	-	-	-	8	5	1	0
Bettles	11	2	0.0	0.0	16	14	0.0	0.0	1	0	-	-	-	-	-	-	-	-	-	-	28	16	0	0
District 4	70	11	0.6	0.0	279	91	0.1	0.0	267	79	0.8	0.0	40	31	0.9	0.0	14	13	0.9	0.0	670	225	319	30

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Table 6.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Combined Est	Combined CI
Community	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	PF	SE	N	n	Total	95%
Tanana	7	2	0.0	0.0	42	11	0.0	0.0	30	8	0.5	0.2	8	6	0.8	0.1	11	10	0.9	0.0	98	37	32	10
Stevens Village	2	1	1.0	-	4	2	0.0	0.0	11	8	0.5	0.1	3	2	1.0	0.0	-	-	-	-	20	13	11	2
Birch Creek	2	0	-	-	10	4	0.5	0.2	4	3	0.3	0.2	-	-	-	-	-	-	-	-	16	7	7	5
Beaver	3	0	-	-	10	8	0.1	0.1	11	11	0.5	0.0	5	5	1.0	0.0	-	-	-	-	29	24	14	1
Fort Yukon	44	6	0.2	0.2	98	25	0.1	0.1	37	12	0.7	0.1	6	5	0.8	0.1	12	11	1.0	0.0	197	59	61	19
Venetie	27	1	0.0	-	37	7	0.1	0.1	14	5	0.2	0.2	3	2	1.0	0.0	-	-	-	-	81	15	17	15
Chalkyitsik	3	2	0.0	0.0	14	12	0.0	0.0	4	3	0.3	0.2	-	-	-	-	-	-	-	-	21	17	1	1
District 5	88	12	0.2	0.1	215	69	0.1	0.0	111	50	0.5	0.1	25	20	0.9	0.0	23	21	1.0	0.0	462	172	143	27
Survey Totals	335	36	0.3	0.1	825	267	0.2	0.0	1,022	349	0.7	0.0	308	270	0.9	0.0	38	35	0.9	0.0	2,528	957	1,278	66

Note: The number of fishing households was estimated from the total number of households (N), the number of households contacted (n), the proportion of households that fished (PF), and the standard error (SE) for each harvest group in each community. Estimated total number of fishing households includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Table 7.–Estimated number of people in households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
																					Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Hooper Bay	17	3	3.0	1.0	69	17	5.3	0.6	98	26	5.7	0.5	28	25	5.7	0.2	-	-	-	-	212	71	1,138	132
Scammon Bay	14	0	-	-	23	5	5.2	1.0	38	10	4.5	0.5	15	15	7.3	0.0	-	-	-	-	90	30	474	69
Coastal District	31	3	3.0	1.0	92	22	5.3	0.5	136	36	5.4	0.4	43	40	6.3	0.1	-	-	-	-	302	101	1,612	149
Nunam Iqua	9	3	3.7	0.7	8	8	5.3	0.0	10	10	4.8	0.0	10	7	5.0	0.5	-	-	-	-	37	28	173	16
Alakanuk	28	0	-	-	32	6	6.7	1.1	56	14	5.6	0.8	23	19	4.7	0.2	-	-	-	-	139	39	799	140
Emmonak	26	1	5.0	-	42	13	4.8	0.5	68	27	5.3	0.5	33	30	5.1	0.2	-	-	-	-	169	71	866	91
Kotlik	16	1	5.0	-	20	6	5.7	1.2	52	13	5.5	0.5	17	16	4.5	0.1	-	-	-	-	105	36	559	79
District 1	79	5	3.7	0.7	102	33	5.6	0.5	186	64	5.4	0.3	83	72	4.9	0.1	-	-	-	-	450	174	2,397	185
Mountain Village	27	0	-	-	31	8	4.6	0.7	70	23	4.5	0.4	32	27	4.8	0.1	1	1	3.0	-	161	59	741	83
Pitkas Point	1	0	-	-	7	5	2.2	0.3	14	11	5.3	0.3	5	5	4.8	0.0	-	-	-	-	27	21	118	9
St. Mary's	3	0	-	-	21	5	3.4	1.5	71	18	4.1	0.6	25	24	4.4	0.1	-	-	-	-	120	47	485	107
Pilot Station	12	1	7.0	-	33	17	3.4	0.4	50	25	5.6	0.3	16	14	5.4	0.2	-	-	-	-	111	57	535	47
Marshall	5	1	3.0	-	12	3	3.0	0.5	42	13	5.1	0.6	14	12	4.9	0.3	-	-	-	-	73	29	333	51
District 2	48	2	3.0	-	104	38	3.6	0.4	247	90	4.8	0.2	92	82	4.8	0.1	1	1	3.0	-	492	213	2,212	152
Russian Mission	4	0	-	-	16	5	3.6	0.5	37	9	5.0	0.5	8	7	5.0	0.2	-	-	-	-	65	21	301	45
Holy Cross	10	1	2.0	-	12	5	3.6	0.4	24	9	3.3	0.5	14	13	3.4	0.1	-	-	-	-	60	28	191	24
Shageluk	5	2	2.0	0.8	5	4	2.0	0.3	14	11	3.0	0.2	3	3	2.3	0.0	-	-	-	-	27	20	69	10
District 3	19	3	2.0	0.3	33	14	3.4	0.3	75	29	4.1	0.3	25	23	3.8	0.1	-	-	-	-	152	69	561	52
Anvik	2	2	2.0	0.0	9	6	2.7	0.4	9	8	3.1	0.3	6	5	2.2	0.2	2	1	5.0	-	28	22	79	8
Grayling	3	1	1.0	-	3	2	6.5	0.3	33	7	3.3	0.7	5	2	4.5	1.2	1	1	1.0	-	45	13	154	46
Kaltag	2	1	10.0	-	14	3	3.3	1.1	42	12	3.3	0.3	5	4	4.0	0.2	-	-	-	-	63	20	223	37
Nulato	1	0	-	-	20	4	2.0	0.9	55	15	3.2	0.4	3	3	2.3	0.0	-	-	-	-	79	22	226	56
Koyukuk	3	0	-	-	15	4	2.3	0.5	16	4	3.0	0.8	4	2	3.5	1.1	3	3	4.0	0.0	41	13	116	33
Galena	10	1	1.0	-	75	15	2.3	0.3	67	17	2.7	0.3	6	5	2.8	0.4	1	1	4.0	-	159	39	387	62
Ruby	6	1	1.0	-	35	8	3.0	0.4	14	5	2.6	0.5	1	1	2.0	-	2	2	2.0	0.0	58	17	153	33
Huslia	7	1	1.0	-	44	13	3.8	0.5	15	2	5.0	1.9	5	5	4.4	0.0	2	2	4.0	0.0	73	23	255	54
Hughes	10	0	-	-	11	11	2.4	0.0	6	4	3.8	0.4	3	3	4.0	0.0	-	-	-	-	30	18	91	8
Allakaket	14	1	4.0	-	32	8	2.3	0.5	7	2	3.5	1.3	2	1	2.0	-	3	3	6.0	0.0	58	15	156	50
Alatna	1	0	-	-	5	3	3.3	0.9	2	2	4.0	0.0	-	-	-	-	-	-	-	-	8	5	28	10
Bettles	11	2	1.5	0.5	16	14	1.6	0.1	1	0	-	-	-	-	-	-	-	-	-	-	28	16	46	5
District 4	70	10	1.7	0.0	279	91	2.7	0.2	267	78	3.1	0.2	40	31	3.3	0.2	14	13	4.1	0.0	670	223	1,914	135

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Table 7.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
																					Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Tanana	7	2	1.0	0.0	42	11	2.5	0.4	30	8	2.1	0.4	8	4	2.8	0.6	11	9	2.3	0.2	98	34	225	45
Stevens Village	2	1	4.0	-	4	2	6.0	1.4	11	8	2.6	0.3	3	2	4.5	0.3	-	-	-	-	20	13	74	13
Birch Creek	2	0	-	-	10	4	2.0	0.4	4	3	1.7	0.2	-	-	-	-	-	-	-	-	16	7	30	10
Beaver	3	0	-	-	10	8	2.0	0.3	11	11	1.7	0.0	5	5	1.8	0.0	-	-	-	-	29	24	54	6
Fort Yukon	44	6	3.7	0.7	98	25	3.1	0.3	37	12	2.8	0.4	6	5	3.8	0.7	12	10	2.4	0.2	197	58	617	98
Venetie	27	1	1.0	-	37	7	2.9	0.4	14	5	3.2	0.7	3	2	5.0	0.0	-	-	-	-	81	15	248	49
Chalkyitsik	3	2	1.5	0.3	14	12	2.3	0.2	4	3	1.3	0.2	-	-	-	-	-	-	-	-	21	17	41	5
District 5	88	12	3.2	0.6	215	69	2.8	0.2	111	50	2.4	0.2	25	18	3.3	0.3	23	19	2.4	0.2	462	168	1,289	119
Survey Totals	335	35	2.7	0.3	825	267	3.5	0.1	1,022	347	4.2	0.1	308	266	4.6	0.1	38	33	3.0	0.1	2,528	948	9,985	339

Note: The number of people in surveyed communities was estimated from the total number of households (N), the number of households contacted (n), average number of people in households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Table 8.–Estimated subsistence harvest including commercially retained (not including test fish) of Chinook salmon by fishing location in surveyed communities, Yukon Area, 2010.

Community	Coastal District	Districts			Subdistricts [a]								River Drainages					Total by Community [b]
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	
Hooper Bay	564	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	564
Scammon Bay	39	677	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	716
Coastal District	603	677	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,280
Nunam Iqua	0	404	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404
Alakanuk	0	803	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	803
Emmonak	0	1,081	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,081
Kotlik	340	1,024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,364
District 1	340	3,312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,652
Mountain Village	0	166	959	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,125
Pitkas Point	0	0	580	0	0	0	0	0	0	0	0	0	0	0	0	0	0	580
St. Mary's	0	400	2,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,800
Pilot Station	0	54	1,276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,330
Marshall	0	0	2,110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,110
District 2	0	620	7,325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,945
Russian Mission	0	0	0	924	0	0	0	0	0	0	0	0	0	0	0	0	0	924
Holy Cross	0	0	0	3,098	0	0	0	0	0	0	0	0	0	0	0	0	0	3,098
Shageluk	0	0	0	80	107	0	0	0	0	0	0	0	90	0	0	0	0	277
District 3	0	0	0	4,102	107	0	0	0	0	0	0	0	90	0	0	0	0	4,299
Anvik	0	0	0	0	1,069	0	0	0	0	0	0	0	0	0	0	0	0	1,069
Grayling	0	0	0	0	2,122	0	0	0	0	0	0	0	0	0	0	0	0	2,122
Kaltag	0	0	0	0	3,191	0	0	0	0	0	0	0	0	0	0	0	0	3,191
Nulato	0	0	0	0	2,989	0	0	0	0	0	0	0	0	0	0	0	0	2,989
Koyukuk	0	0	0	0	746	121	0	0	0	0	0	0	0	0	0	0	0	867
Galena	0	0	0	0	549	255	547	0	6	0	0	0	0	0	0	0	0	1,357
Ruby	0	0	0	0	0	87	1,015	0	0	0	0	0	0	0	0	0	0	1,102
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	0	0	65
Hughes	0	0	0	0	10	0	0	0	0	0	0	0	0	53	0	0	0	63
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	63	0	0	0	63
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	10,676	463	1,562	0	6	0	0	0	0	181	0	0	0	12,888

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Table 8.–Page 2 of 2.

Community	Coastal District	Districts 1	2	3	Subdistricts [a] 4A	4B	4C	5A	5B	5C	5D-down	5D-up	River Drainages Innoko	Koyukuk	Chandalar	Porcupine	Black	Total by Community [b]
Tanana	0	0	0	0	0	11	0	611	2,163	430	0	0	0	0	0	0	0	3,215
Stevens Village	0	0	0	0	0	0	0	0	0	0	469	0	0	0	0	0	0	469
Birch Creek	0	0	0	0	0	0	0	0	0	0	73	0	0	0	0	0	0	73
Beaver	0	0	0	0	0	0	0	0	0	0	198	0	0	0	0	0	0	198
Fort Yukon	0	0	0	0	0	0	0	0	0	0	126	1,454	0	0	0	103	0	1,683
Venetie	0	0	0	0	0	0	0	0	0	0	92	0	0	0	675	0	0	767
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5	0	0	0	0	0	11	0	611	2,163	430	958	1,454	0	0	675	103	0	6,405
Survey Totals	943	4,609	7,325	4,102	10,783	474	1,562	611	2,169	430	958	1,454	90	181	675	103	0	36,469

Note: Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

[a] Harvest in Subdistrict 5-D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

[b] Totals may not add in both directions due to decimal rounding.

Table 9.–Estimated subsistence harvest including commercially retained (not including test fish) of summer chum salmon by fishing location in surveyed communities, Yukon Area, 2010.

	Coastal	Districts			Subdistricts [a]								River Drainages					Total by
Community	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community [b]
Hooper Bay	16,279	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,279
Scammon Bay	2,796	2,609	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,405
Coastal District	19,075	2,609	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,684
Nunam Iqua	0	2,267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,267
Alakanuk	0	7,446	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,446
Emmonak	0	9,109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,109
Kotlik	592	3,106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,698
District 1	592	21,928	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,520
Mountain Village	0	1,127	5,759	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,886
Pitkas Point	0	0	633	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633
St. Mary's	0	359	7,084	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,443
Pilot Station	0	128	4,695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,823
Marshall	0	0	2,395	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,395
District 2	0	1,614	20,566	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,180
Russian Mission	0	0	0	528	0	0	0	0	0	0	0	0	0	0	0	0	0	528
Holy Cross	0	0	0	463	0	0	0	0	0	0	0	0	0	0	0	0	0	463
Shageluk	0	0	0	74	0	0	0	0	0	0	0	0	276	0	0	0	0	350
District 3	0	0	0	1,065	0	0	0	0	0	0	0	0	276	0	0	0	0	1,341
Anvik	0	0	0	0	451	0	0	0	0	0	0	0	0	0	0	0	0	451
Grayling	0	0	0	0	1,612	0	0	0	0	0	0	0	0	0	0	0	0	1,612
Kaltag	0	0	0	0	102	0	0	0	0	0	0	0	0	0	0	0	0	102
Nulato	0	0	0	0	416	0	0	0	0	0	0	0	0	0	0	0	0	416
Koyukuk	0	0	0	0	352	0	0	0	0	0	0	0	0	0	0	0	0	352
Galena	0	0	0	0	22	498	958	0	224	0	0	0	0	0	0	0	0	1,702
Ruby	0	0	0	0	0	0	1,971	0	0	0	0	0	0	0	0	0	0	1,971
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	1,349	0	0	0	1,349
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	878	0	0	0	878
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	2,864	0	0	0	2,864
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	23
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	2,955	498	2,929	0	224	0	0	0	0	5,114	0	0	0	11,720

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Table 9.–Page 2 of 2.

Community	Coastal District	Districts 1	2	3	Subdistricts [a] 4A	4B	4C	5A	5B	5C	5D-down	5D-up	River Drainages Innoko	Koyukuk	Chandalar	Porcupine	Black	Total by Community [b]
Tanana	0	0	0	0	0	0	0	999	846	11	0	0	0	0	0	0	0	1,856
Stevens Village	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0	28
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	22
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	722	0	0	0	0	0	722
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	0	0	133
District 5	0	0	0	0	0	0	0	999	846	11	50	722	0	0	133	0	0	2,761
Survey Totals	19,667	26,151	20,566	1,065	2,955	498	2,929	999	1,070	11	50	722	276	5,114	133	0	0	82,206

Note: Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

[a] Harvest in Subdistrict 5-D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

[b] Totals may not add in both directions due to decimal rounding.

Table 10.–Estimated subsistence harvest including commercially retained (not including test fish) of fall chum salmon by fishing location in surveyed communities, Yukon Area, 2010.

	Coastal	Districts			Subdistricts [a]								River Drainages					Total by
Community	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community [b]
Hooper Bay	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
Scammon Bay	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70
Coastal District	186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186
Nunam Iqua	0	143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
Alakanuk	0	739	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	739
Emmonak	0	915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	915
Kotlik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 1	0	1,797	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,797
Mountain Village	0	0	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
Pitkas Point	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
St. Mary's	0	83	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	387
Pilot Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marshall	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
District 2	0	83	503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	586
Russian Mission	0	0	0	104	0	0	0	0	0	0	0	0	0	0	0	0	0	104
Holy Cross	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	1,200	0	0	0	0	1,200
District 3	0	0	0	125	0	0	0	0	0	0	0	0	1,200	0	0	0	0	1,325
Anvik	0	0	0	0	169	0	0	0	0	0	0	0	0	0	0	0	0	169
Grayling	0	0	0	0	202	0	0	0	0	0	0	0	0	0	0	0	0	202
Kaltag	0	0	0	0	658	0	0	0	0	0	0	0	0	0	0	0	0	658
Nulato	0	0	0	0	1,049	0	0	0	0	0	0	0	0	0	0	0	0	1,049
Koyukuk	0	0	0	0	612	180	0	0	0	0	0	0	0	0	0	0	0	792
Galena	0	0	0	0	46	317	1,284	0	321	0	0	0	0	0	0	0	0	1,968
Ruby	0	0	0	0	0	20	1,006	0	0	0	0	0	0	0	0	0	0	1,026
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	403	0	0	0	403
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	521	0	0	0	521
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	2,736	517	2,290	0	321	0	0	0	0	924	0	0	0	6,788

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Table 10.–Page 2 of 2.

Community	Coastal District	Districts 1	2	3	Subdistricts [a] 4A	4B	4C	5A	5B	5C	5D-down	5D-up	River Drainages Innoko	Koyukuk	Chandalar	Porcupine	Black	Total by Community [b]
Tanana	0	0	0	0	0	0	0	5,296	9,666	22	0	0	0	0	0	0	0	14,984
Stevens Village	0	0	0	0	0	0	0	0	0	0	2,706	0	0	0	0	0	0	2,706
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37
Fort Yukon	0	0	0	0	0	0	0	0	0	0	149	4,483	0	0	0	1,374	0	6,006
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,989	0	0	2,989
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5	0	0	0	0	0	0	0	5,296	9,666	22	2,892	4,483	0	0	2,989	1,374	0	26,722
Survey Totals	186	1,880	503	125	2,736	517	2,290	5,296	9,987	22	2,892	4,483	1,200	924	2,989	1,374	0	37,404

Note: Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

[a] Harvest in Subdistrict 5-D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

[b] Totals may not add in both directions due to decimal rounding.

Table 11.–Estimated subsistence harvest including commercially retained (not including test fish) of coho salmon by fishing location in surveyed communities, Yukon Area, 2010.

	Coastal	Districts			Subdistricts [a]								River Drainages					Total by
Community	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community [b]
Hooper Bay	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Scammon Bay	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79
Coastal District	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
Nunam Iqua	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
Alakanuk	0	449	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	449
Emmonak	0	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174
Kotlik	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
District 1	0	742	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	742
Mountain Village	0	0	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127
Pitkas Point	0	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
St. Mary's	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92
Pilot Station	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Marshall	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
District 2	0	0	379	0	0	0	0	0	0	0	0	0	0	0	0	0	0	379
Russian Mission	0	0	0	300	0	0	0	0	0	0	0	0	0	0	0	0	0	300
Holy Cross	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	53
District 3	0	0	0	300	0	0	0	0	0	0	0	0	53	0	0	0	0	353
Anvik	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	28
Grayling	0	0	0	0	132	0	0	0	0	0	0	0	0	0	0	0	0	132
Kaltag	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nulato	0	0	0	0	242	0	0	0	0	0	0	0	0	0	0	0	0	242
Koyukuk	0	0	0	0	254	0	0	0	0	0	0	0	0	0	0	0	0	254
Galena	0	0	0	0	0	175	84	0	290	0	0	0	0	0	0	0	0	549
Ruby	0	0	0	0	0	148	0	0	0	0	0	0	0	0	0	0	0	148
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	289	0	0	0	289
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	88	0	0	0	88
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	656	323	84	0	290	0	0	0	0	377	0	0	0	1,730

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Table 11.–Page 2 of 2.

Community	Coastal District	Districts 1	2	3	Subdistricts [a] 4A	4B	4C	5A	5B	5C	5D-down	5D-up	River Drainages Innoko	Koyukuk	Chandalar	Porcupine	Black	Total by Community [b]
Tanana	0	0	0	0	0	0	0	1,336	967	11	0	0	0	0	0	0	0	2,314
Stevens Village	0	0	0	0	0	0	0	0	0	0	428	0	0	0	0	0	0	428
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	244	0	0	0	0	0	244
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	159
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	267	0	0	0	0	0	267
District 5	0	0	0	0	0	0	0	1,336	967	11	429	511	0	0	159	0	0	3,413
Survey Totals	124	742	379	300	656	323	84	1,336	1,257	11	429	511	53	377	159	0	0	6,741

Note: Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

[a] Harvest in Subdistrict 5-D near Ft. Yukon is divided according to whether harvest occurred downriver (5-D-down) or upriver (5-D-up) of the confluence of the Porcupine River with the Yukon River.

[b] Totals may not add in both directions due to decimal rounding.

Table 12.–Estimated subsistence harvest of pink salmon, whitefish, pike, and sheefish by surveyed communities, Yukon Area, 2010.

			Estimated Subsistence Harvest										Total
			Pink Salmon		Large Whitefish [a]		Small Whitefish [a]		Northern Pike		Sheefish		Expanded
	Total	Households	Estimated	CI	Estimated	CI	Estimated	CI	Estimated	CI	Estimated	CI	Miscellaneous
Community	Households	Contacted [b]	Total	95%	Total	95%	Total	95%	Total	95%	Total	95%	Fish Harvest
Hooper Bay	212	72	219	297	805	660	2,437	970	371	208	48	64	3,880
Scammon Bay	90	30	2,245	1,042	667	382	2,590	1,471	1,334	517	334	81	7,170
Coastal District	302	102	2,464	1,084	1,472	763	5,027	1,762	1,705	557	382	103	11,050
Nunam Iqua	37	28	306	307	133	64	1,217	361	105	87	621	291	2,382
Alakanuk	139	39	151	173	224	145	4,975	2,403	1,096	843	340	182	6,786
Emmonak	169	72	206	55	1,043	417	3,494	1,310	1,591	497	1,055	364	7,389
Kotlik	105	37	124	59	345	208	2,199	869	622	342	912	326	4,202
District 1	450	176	787	361	1,745	492	11,885	2,894	3,414	1,040	2,928	597	20,759
Mountain Village	161	60	217	106	566	279	1,571	664	1,623	635	493	276	4,470
Pitkas Point	27	21	143	36	339	68	141	24	98	24	133	30	854
St. Mary's	120	47	543	379	2,026	1,048	217	115	673	181	349	166	3,808
Pilot Station	111	57	22	25	1,145	529	205	166	454	162	487	159	2,313
Marshall	73	29	21	18	1,176	462	224	189	1,721	1,425	499	359	3,641
District 2	492	214	946	396	5,252	1,294	2,358	720	4,569	1,579	1,961	509	15,086
Russian Mission	65	21	2	2	1,090	436	0	0	723	282	316	209	2,131
Holy Cross	60	28	0	0	516	194	0	0	81	31	59	35	656
Shageluk	27	20	0	0	687	69	0	0	129	40	50	26	866
District 3	152	69	2	2	2,293	482	0	0	933	287	425	214	3,653
Anvik	28	22	0	0	129	47	24	19	49	23	109	29	311
Grayling	45	13	0	0	366	140	9	16	196	154	266	171	837
Kaltag	63	20	0	0	168	148	0	0	95	118	115	65	378
Nulato	79	23	0	0	261	191	37	62	88	85	308	192	694
Koyukuk	41	13	0	0	737	12	0	0	131	0	13	12	881
Galena	159	40	0	0	2,446	1,400	424	393	238	136	238	90	3,346
Ruby	58	17	0	0	160	173	74	87	94	33	67	70	395
Huslia	73	23	0	0	834	0	138	0	894	140	171	0	2,037
Hughes	30	18	0	0	914	339	1,145	0	139	98	290	255	2,488
Allakaket	58	15	0	0	1,094	569	1,076	277	437	153	660	466	3,267
Alatna	8	5	0	0	40	12	51	0	21	0	12	5	124
Bettles	28	16	0	0	0	0	0	0	4	2	4	3	8
District 4	670	225	0	0	7,149	1,584	2,978	493	2,386	343	2,253	605	14,766

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Table 12.–Page 2 of 2.

Community	Total Households	Households Contacted [b]	Estimated Subsistence Harvest: Pink Salmon Estimated Total	Pink Salmon CI 95%	Large Whitefish [a] Estimated Total	Large Whitefish CI 95%	Small Whitefish [a] Estimated Total	Small Whitefish CI 95%	Northern Pike Estimated Total	Northern Pike CI 95%	Sheefish Estimated Total	Sheefish CI 95%	Total Expanded Miscellaneous Fish Harvest
Tanana	98	37	0	0	4,351	1,178	3,305	1,978	436	212	871	267	8,963
Stevens Village	20	13	0	0	171	171	300	339	30	20	74	69	575
Birch Creek	16	8	0	0	115	92	30	30	90	71	9	9	244
Beaver	29	24	0	0	19	0	17	0	122	0	17	0	175
Fort Yukon	197	58	0	0	749	523	969	1,050	334	151	301	91	2,353
Venetie	81	15	0	0	15	15	0	0	25	30	7	8	47
Chalkyitsik	21	17	0	0	9	6	13	13	27	11	3	3	52
District 5	462	172	0	0	5,429	1,304	4,634	2,265	1,064	272	1,282	291	12,409
Survey Totals	2,528	958	4,199	1,209	23,340	2,635	26,882	4,168	14,071	2,040	9,231	1,059	77,723

Note: The estimated harvest in surveyed communities is based on a stratified random sample of households as designated for the estimation of subsistence salmon harvests. Estimates include a 95% confidence interval (CI 95%).

[a] Large whitefish are considered those 4 pounds or larger and small whitefish are less than 4 pounds.

[b] The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 13.–Reported subsistence harvest of other miscellaneous fish species by surveyed communities, Yukon Area, 2010.

Community	Total Households	Households Contacted [a]	Reported Harvest of Miscellaneous Fish Species (Not Expanded)								Total Not Expanded Miscellaneous Fish Harvest
			Burbot	Arctic Lamprey [b]	Tomcod	Arctic Grayling	Longnose Sucker	Arctic Char	Alaska Blackfish	Sockeye Salmon [c]	
Hooper Bay	212	72	6	0	1,258	0	0	0	4,550	40	5,854
Scammon Bay	90	30	29	0	1,057	0	0	0	26,190	31	27,307
Coastal District	302	102	35	0	2,315	0	0	0	30,740	71	33,161
Nunam Iqua	37	28	46	0	760	0	0	6	3,780	1	4,593
Alakanuk	139	39	28	0	245	0	0	53	1,892	1	2,219
Emmonak	169	72	557	0	371	0	0	3	9,541	29	10,501
Kotlik	105	37	109	0	184	10	0	5	2,590	37	2,935
District 1	450	176	740	0	1,560	10	0	67	17,803	68	20,248
Mountain Village	161	60	333	214	103	94	0	6	6,510	7	7,267
Pitkas Point	27	21	37	30	0	3	0	0	2,520	4	2,594
St. Mary's	120	47	142	236	0	50	0	0	4,140	49	4,617
Pilot Station	111	57	188	670	0	4	0	0	3,540	3	4,405
Marshall	73	29	780	1,300	0	0	0	0	910	15	3,005
District 2	492	214	1,480	2,450	103	151	0	6	17,620	78	21,888
Russian Mission	65	21	88	7,463	0	0	0	0	2,700	32	10,283
Holy Cross	60	28	45	120	0	0	0	0	0	6	171
Shageluk	27	20	2	0	0	0	0	0	0	0	2
District 3	152	69	135	7,583	0	0	0	0	2,700	38	10,456
Anvik	28	22	32	630	0	3	0	0	0	3	668
Grayling	45	13	3	200	0	22	0	0	0	0	225
Kaltag	63	20	7	0	0	10	0	1	10	0	28
Nulato	79	23	12	0	0	149	3	59	0	0	223
Koyukuk	41	13	1	0	0	0	0	0	0	0	1
Galena	159	40	67	0	0	5	2	0	0	5	79
Ruby	58	16	4	0	0	42	0	3	0	0	49
Huslia	73	23	71	0	0	40	5	0	0	0	116
Hughes	30	18	2	0	0	50	10	0	0	0	62
Allakaket	58	15	5	0	0	51	200	0	0	0	256
Alatna	8	5	0	0	0	6	2	0	0	0	8
Bettles	28	16	0	0	0	16	0	10	0	0	26
District 4	670	224	204	830	0	394	222	73	10	8	1,741

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Table 13.–Page 2 of 2.

Community	Total Households	Households Contacted [a]	Reported Harvest of Miscellaneous Fish Species (Not Expanded)								Total Not Expanded Miscellaneous Fish Harvest
			Burbot	Arctic Lamprey [b]	Tomcod	Arctic Grayling	Longnose Sucker	Arctic Char	Alaska Blackfish	Sockeye Salmon [c]	
Tanana	98	37	116	0	0	2	36	1	0	0	155
Stevens Village	20	13	0	0	0	0	5	0	0	0	5
Birch Creek	16	7	0	0	0	0	0	1	0	0	1
Beaver	29	24	2	0	0	12	0	0	0	0	14
Fort Yukon	197	58	30	0	0	570	10	0	0	0	610
Venetie	81	15	0	0	0	422	0	0	0	0	422
Chalkyitsik	21	17	1	0	0	10	0	0	0	0	11
District 5	462	171	149	0	0	1016	51	2	0	0	1,218
Survey Totals	2,528	956	2,743	10,863	3,978	1,571	273	148	68,873	263	88,712

[a] The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

[b] Surveys are conducted before the Arctic lamprey fishery occurs in November and December. Consequently totals are for previous year harvest, i.e., the 2010 reported harvest is for the 2009 calendar year.

[c] Due to low harvest numbers of sockeye salmon and difficulties with identification by fishermen, the harvest is not estimated.

Table 14.–Responses to survey question assessing percentage of subsistence salmon needs being met, by community, by species, Yukon Area, 2010.

		Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species									
		Chinook Salmon					Summer Chum Salmon				
Community	Total Households	Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%	Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%
Hooper Bay	212	34	41%	9%	6%	44%	38	24%	5%	11%	61%
Scammon Bay	90	20	60%	15%	5%	20%	20	35%	5%	0%	60%
Coastal District	302	54	48%	11%	6%	35%	58	28%	5%	7%	60%
Nunam Iqua	37	18	50%	11%	17%	22%	21	48%	10%	19%	24%
Alakanuk	139	20	50%	15%	10%	25%	21	43%	14%	19%	24%
Emmonak	169	54	63%	11%	7%	19%	49	57%	12%	4%	27%
Kotlik	105	25	52%	16%	16%	16%	25	52%	24%	16%	8%
District 1	450	117	56%	13%	11%	20%	116	52%	15%	12%	22%
Mountain Village	161	43	40%	21%	14%	26%	41	46%	12%	17%	24%
Pitkas Point	27	13	38%	15%	8%	38%	14	50%	14%	14%	21%
St. Mary's	120	26	23%	12%	23%	42%	26	19%	31%	15%	35%
Pilot Station	111	24	33%	25%	17%	25%	24	54%	21%	13%	13%
Marshall	73	19	26%	32%	5%	37%	20	15%	30%	15%	40%
District 2	492	125	33%	21%	14%	32%	125	38%	21%	15%	26%
Russian Mission	65	11	45%	36%	9%	9%	6	33%	50%	17%	0%
Holy Cross	60	19	26%	16%	11%	47%	7	43%	14%	14%	29%
Shageluk	27	9	44%	0%	11%	44%	5	40%	20%	0%	40%
District 3	152	39	36%	18%	10%	36%	18	39%	28%	11%	22%
Anvik	28	13	31%	0%	23%	46%	5	80%	0%	0%	20%
Grayling	45	9	22%	22%	22%	33%	1	0%	0%	0%	100%
Kaltag	63	13	23%	15%	15%	46%	1	0%	0%	0%	100%
Nulato	79	12	0%	17%	33%	50%	4	25%	0%	25%	50%
Koyukuk	41	7	29%	14%	43%	14%	3	67%	0%	0%	33%
Galena	159	15	47%	20%	20%	13%	7	57%	14%	14%	14%
Ruby	58	3	33%	33%	33%	0%	0	-	-	-	-
Huslia	73	14	79%	7%	7%	7%	4	25%	25%	0%	50%
Hughes	30	5	60%	40%	0%	0%	3	33%	0%	0%	67%
Allakaket	58	3	67%	33%	0%	0%	7	57%	14%	0%	29%
Alatna	8	3	100%	0%	0%	0%	0	-	-	-	-
Bettles	28	7	100%	0%	0%	0%	0	-	-	-	-
District 4	670	104	43%	14%	18%	24%	35	49%	9%	6%	37%

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Table 14.–Page 2 of 4.

Community	Total Households	Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species: Chinook Salmon: Total Number of Household Responses	Chinook Salmon: % HH's Responses 0% to 25%	Chinook Salmon: % HH's Responses 26 % to 50%	Chinook Salmon: % HH's Responses 51% to 75%	Chinook Salmon: % HH's Responses 76% to 100%	Summer Chum Salmon: Total Number of Household Responses	Summer Chum Salmon: % HH's Responses 0% to 25%	Summer Chum Salmon: % HH's Responses 26 % to 50%	Summer Chum Salmon: % HH's Responses 51% to 75%	Summer Chum Salmon: % HH's Responses 76% to 100%
Tanana	98	13	31%	8%	15%	46%	5	60%	0%	0%	40%
Stevens Village	20	8	75%	13%	0%	13%	1	100%	0%	0%	0%
Birch Creek	16	3	67%	0%	0%	33%	0	-	-	-	-
Beaver	29	17	76%	0%	6%	18%	2	50%	0%	50%	0%
Fort Yukon	197	29	76%	10%	7%	7%	1	0%	0%	0%	100%
Venetie	81	8	75%	0%	13%	13%	1	100%	0%	0%	0%
Chalkyitsik	21	0	-	-	-	-	1	0%	0%	0%	100%
District 5	462	78	68%	6%	8%	18%	11	55%	0%	9%	36%
Survey Totals	2,528	517	47%	14%	11%	27%	363	43%	13%	10%	34%

-continued-

Table 14.–Page 3 of 4.

Community	Total Households	Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species: Fall Chum Salmon: Total Number of Household Responses	Fall Chum Salmon: % HH's Responses 0% to 25%	Fall Chum Salmon: % HH's Responses 26 % to 50%	Fall Chum Salmon: % HH's Responses 51% to 75%	Fall Chum Salmon: % HH's Responses 76% to 100%	Coho Salmon: Total Number of Household Responses	Coho Salmon: % HH's Responses 0% to 25%	Coho Salmon: % HH's Responses 26 % to 50%	Coho Salmon: % HH's Responses 51% to 75%	Coho Salmon: % HH's Responses 76% to 100%
Hooper Bay	212	1	0%	0%	0%	100%	1	100%	0%	0%	0%
Scammon Bay	90	3	67%	33%	0%	0%	4	75%	0%	0%	25%
Coastal District	302	4	50%	25%	0%	25%	5	80%	0%	0%	20%
Nunam Iqua	37	10	70%	10%	10%	10%	4	75%	25%	0%	0%
Alakanuk	139	4	25%	25%	0%	50%	4	50%	0%	0%	50%
Emmonak	169	25	76%	4%	4%	16%	12	58%	8%	0%	33%
Kotlik	105	10	100%	0%	0%	0%	11	100%	0%	0%	0%
District 1	450	49	76%	6%	4%	14%	31	74%	6%	0%	19%
Mountain Village	161	8	100%	0%	0%	0%	6	100%	0%	0%	0%
Pitkas Point	27	5	80%	0%	0%	20%	3	67%	0%	0%	33%
St. Mary's	120	2	50%	0%	0%	50%	3	100%	0%	0%	0%
Pilot Station	111	4	100%	0%	0%	0%	3	100%	0%	0%	0%
Marshall	73	7	100%	0%	0%	0%	4	100%	0%	0%	0%
District 2	492	26	92%	0%	0%	8%	19	95%	0%	0%	5%
Russian Mission	65	2	50%	0%	0%	50%	1	0%	0%	0%	100%
Holy Cross	60	2	100%	0%	0%	0%	0	-	-	-	-
Shageluk	27	3	67%	0%	0%	33%	1	0%	0%	100%	0%
District 3	152	7	71%	0%	0%	29%	2	0%	0%	50%	50%
Anvik	28	4	75%	0%	0%	25%	2	50%	0%	0%	50%
Grayling	45	1	0%	100%	0%	0%	2	100%	0%	0%	0%
Kaltag	63	2	50%	0%	0%	50%	0	-	-	-	-
Nulato	79	1	0%	0%	0%	100%	0	-	-	-	-
Koyukuk	41	3	67%	0%	33%	0%	0	-	-	-	-
Galena	159	3	33%	0%	33%	33%	3	67%	0%	0%	33%
Ruby	58	1	0%	100%	0%	0%	1	0%	0%	100%	0%
Huslia	73	6	50%	50%	0%	0%	5	100%	0%	0%	0%
Hughes	30	1	100%	0%	0%	0%	1	100%	0%	0%	0%
Allakaket	58	0	-	-	-	-	1	0%	0%	100%	0%
Alatna	8	1	100%	0%	0%	0%	0	-	-	-	-
Bettles	28	2	100%	0%	0%	0%	1	100%	0%	0%	0%
District 4	670	25	56%	20%	8%	16%	16	75%	0%	13%	13%

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Table 14.–Page 4 of 4.

Community	Total Households	Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species									
		Fall Chum Salmon					Coho Salmon				
		Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%	Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%
Tanana	98	8	13%	0%	13%	75%	5	40%	20%	0%	40%
Stevens Village	20	3	0%	67%	0%	33%	4	50%	25%	25%	0%
Birch Creek	16	0	-	-	-	-	0	-	-	-	-
Beaver	29	1	100%	0%	0%	0%	0	-	-	-	-
Fort Yukon	197	9	44%	33%	0%	22%	2	50%	50%	0%	0%
Venetie	81	1	100%	0%	0%	0%	0	-	-	-	-
Chalkyitsik	21	0	-	-	-	-	1	0%	0%	0%	100%
District 5	462	22	32%	23%	5%	41%	12	42%	25%	8%	25%
Survey Totals	2,528	133	63%	12%	3%	22%	85	61%	5%	12%	22%

Note: Dashes indicate indefinable values.

Table 15.–Reported subsistence and commercial harvest of Arctic lamprey from postseason postcards for the October 1 to December 31, 2009 fishing period.

Community	Households Mailed Postcards	Returned Postcards	Reported Subsistence Fishing	Subsistence Lamprey Harvested [a]	Reported Commercial Fishing [a]	Commercial Lamprey Harvested [a]	Number of Lamprey Given away [a]	Number of Lamprey Received [a]
Mountain Village	141	23	7	84	1	0	30	24
Pitkas Point	26	1	0	0	0	0	0	0
St. Mary's	123	29	7	42	0	0	15	33
Pilot Station	104	15	5	240	0	0	60	147
Marshall	74	11	5	855	1	432	24	0
Russian Mission	67	10	5	975	1	285	285	615
Holy Cross	56	11	3	0	2	0	0	0
Anvik	28	6	2	480	1	4200	90	15
Grayling	49	3	1	750	1	4200	150	0
Totals	668	109	35	3,426	7	9,117	654	834
Percent		16%	5%					

Note: Postcards were mailed on November 12, 2009 to all households in the above communities. Arctic lamprey harvest occurs after communities have been surveyed. The 2010 survey asks about harvests from the previous winter.

[a] Arctic lamprey are estimated to weigh 1/3 of a pound each for converting between pounds and number harvested.

Table 16.–Reported subsistence and personal use fish harvested under the authority of a permit, listed by permit area, Yukon Area, 2010.

Permit Fishing Area	Permit [a] Type	Issued [b]	Returned	Percent Returned	Number of Permits Returned that Fished [c]	Reported Harvest: Chinook [d]	Summer Chum [d]	Fall Chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern Pike	Longnose Sucker	Arctic Grayling
Subsistence Permit															
Koyukuk Middle and South Fork Rivers	SF	1	1	100%	1	0	0	0	0	8	0	0	0	0	0
Yukon River Rampart Area	SR	28	27	96%	22	1,344	304	1,235	24	162	1	5	20	0	1
Yukon River near Haul Road Bridge	SY	85	81	95%	43	1,300	448	422	2	67	9	0	12	0	0
Yukon River near	SE	67	63	94%	36	811	45	4,540	164	148	33	10	40	32	144
Circle and Eagle [e]	SEU	26	26	100%	20	604	17	11,415	1	106	25	7	1	8	12
Tanana River Subdistrict 6A	SA	22	22	100%	11	360	106	3,094	1,963	69	6	0	3	0	0
Tanana River Subdistrict 6B	SB	93	85	91%	32	583	316	7,625	3,429	496	7	6	18	34	1
Tanana River Upstream of Subdistrict 6C	SU	41	34	83%	19	10	0	12	0	1,594	0	11	13	21	38
Kantishna River Subdistrict 6A	SK	4	4	100%	3	1	0	82	23	3	0	3	28	0	0
Tolovana River Pike Subdistrict 6B	ST	96	90	94%	42	0	0	0	0	181	39	0	115	9	0
Subsistence Permit Subtotals		463	433	94%	229	5,013	1,236	28,425	5,606	2,834	120	42	250	104	196
Personal Use Permit															
Tanana River Salmon Subdistrict 6C	PC	67	67	100%	38	162	319	3,208	1,062	192	0	3	6	9	5
Tanana River Whitefish Upstream of Subdistrict 6C	PW	8	6	75%	3	0	0	1	0	14	1	0	1	57	0
Personal Use Permit Subtotals		75	73	97%	41	162	319	3,209	1,062	206	1	3	7	66	5
Permit Totals		538	506	94%	270	5,175	1,555	31,634	6,668	3,040	121	45	257	170	201

-continued-

[a] Permits returned as of May 29, 2011.

[b] Includes 46 households that were "issued" permits for more than one area, one household that was issued a duplicate permit for same area, and 5 permit holders issued an additional SE or SEU permit to track harvest above and below Eagle sonar project.

[c] Includes 9 households that "fished" in 2 different permit areas.

[d] Does not include District 6 commercial related harvest of 189 Chinook, 578 fall chum, and 140 coho salmon caught but "not sold" during commercial fishing and retained for subsistence use in 2010.

[e] Does not include 4 Chinook salmon that could not be released live from the ADF&G Eagle Sonar test fish project and were given to residents of Eagle. Harvest taking place between the Eagle Sonar and the U.S./Canada border is reported on SEU permits.

Table 17.–Reported subsistence and personal use fish harvested under the authority of a permit, listed by fishery, by community of residence, and by drainage, Yukon Area, 2010.

Community	Harvest by Drainage	Permits [a] Issued [b]	Returned	Percent Returned	Number of Permits Returned that Fished [c]	Reported Harvest: Chinook [d]	Summer Chum	Fall Chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern Pike	Longnose Sucker	Arctic Grayling
Subsistence Permit															
Central	Yukon River	7	7	100%	5	90	0	0	0	2	1	0	0	0	0
Circle	Yukon River	33	30	91%	16	324	37	927	164	3	0	0	0	0	0
Eagle [e]	Yukon River	34	34	100%	27	863	25	15,008	1	248	53	14	28	40	156
Fairbanks (FNSB)[f]	Yukon River	93	90	97%	52	1,670	427	822	2	104	14	0	39	0	1
	Tanana River	17	16	94%	9	91	183	678	212	102	3	0	5	1	0
	Tolovana River	76	74	97%	38	0	0	0	0	15	0	0	44	0	0
	Kantishna River	1	1	100%	1	0	0	0	0	0	0	0	24	0	0
	FNSB Subtotal	187	181	97%	100	1,761	610	1,500	214	221	17	0	112	1	1
Healy	Yukon River	0	0	-	0	0	0	0	0	0	0	0	0	0	0
	Tanana River	5	5	100%	3	1	30	1,042	1,197	219	2	6	12	33	0
	Kantishna River	1	1	100%	1	1	0	26	1	1	0	0	0	0	0
	Healy Subtotal	6	6	100%	4	2	30	1068	1198	220	2	6	12	33	0
Manley	Yukon River	1	1	100%	1	267	11	0	0	0	0	0	0	0	0
	Tanana River	16	16	100%	8	337	102	2,640	1,810	60	3	0	1	0	0
	Kantishna River	1	1	100%	1	0	0	56	22	2	0	3	4	0	0
	Manley Subtotal	18	18	100%	10	604	113	2,696	1,832	62	3	3	5	0	0
Minto	Yukon River	4	4	100%	2	71	45	0	0	0	0	0	0	0	0
	Tanana River	25	22	88%	6	43	8	70	0	4	0	0	6	0	0
	Tolovana River	19	15	79%	4	0	0	0	0	166	39	0	71	9	0
	Minto Subtotal	48	41	85%	12	114	53	70	0	170	39	0	77	9	0
Nenana	Yukon River	1	1	100%	1	35	0	0	0	0	0	0	0	0	0
	Tanana River	50	46	92%	17	469	83	6,224	2,173	187	5	0	0	0	1
	Kantishna River	1	1	100%	0	0	0	0	0	0	0	0	0	0	0
	Nenana Subtotal	52	48	92%	18	504	83	6224	2173	187	5	0	0	0	1
Rampart	Yukon River	6	5	83%	4	262	161	735	24	76	0	0	0	0	0
Stevens Village	Yukon River	5	4	80%	1	71	20	0	0	0	0	0	0	0	0
Villages (UTV) [g]	Yukon River	12	11	92%	5	67	25	20	0	0	0	3	1	0	0
	Tanana River	40	34	85%	18	10	0	12	0	1,574	0	11	10	21	38
	UTV Subtotal	52	45	87%	23	77	25	32	0	1,574	0	14	11	21	38

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Table 17.–Page 2 of 2.

Community	Harvest by Drainage	Permits [a] Issued [b]	Returned	Percent Returned	Number of Permits Returned that Fished [c]	Reported Harvest: Chinook [d]	Summer Chum	Fall Chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern Pike	Longnose Sucker	Arctic Grayling
Other Subsistence [h]	Yukon River	11	11	100%	8	339	63	100	0	58	0	5	5	0	0
	Tanana River	3	2	67%	1	2	16	65	0	13	0	0	0	0	0
	Tolovana River	1	1	100%	0	0	0	0	0	0	0	0	0	0	0
	Kantishna River	0	0	-	0	0	0	0	0	0	0	0	0	0	0
	Other Subtotal	15	14	93%	9	341	79	165	0	71	0	5	5	0	0
Subsistence	Permit Subtotals	463	433	94%	229	5,013	1,236	28,425	5,606	2,834	120	42	250	104	196
Personal Use Permit															
Fairbanks (FNSB) [f]	Tanana River	73	71	97%	39	154	317	3,209	1,062	198	1	3	7	15	5
Other Personal Use [i]	Tanana River	2	2	100%	2	8	2	0	0	8	0	0	0	51	0
Personal Use	Permit Subtotals	75	73	97%	41	162	319	3,209	1,062	206	1	3	7	66	5
Permit Totals		538	506	94%	270	5,175	1,555	31,634	6,668	3,040	121	45	257	170	201

[a] Permits returned as of May 29, 2011.

[b] Includes 46 households that were "issued" permits for more than one area. Additionally includes one household that was issued a duplicate permit for same area.

[c] Includes 5 households issued SE and SEU permits, and 3 household that “fished” in both permit areas.

[d] Does not include District 6 commercial related harvest of 189 Chinook, 578 fall chum, and 140 coho salmon caught but "not sold" during commercial fishing and retained for subsistence use.

[e] Does not include 4 Chinook salmon that could not be released live from the ADF&G Eagle Sonar test fish project.

[f] Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

[g] Upper Tanana Villages (UTV) include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

[h] "Other Subsistence" represents residents from Anchorage, Anchor Point, Anderson, , Denali Park, Eagle River, Galena, Palmer, Tanana, Wasilla, and Wiseman who were issued a subsistence fishing permit for Yukon, Tanana, Tolovana, Kantishna, and Upper Koyukuk rivers.

[i] "Other Personal Use" includes residents from Nenana and Delta Junction.

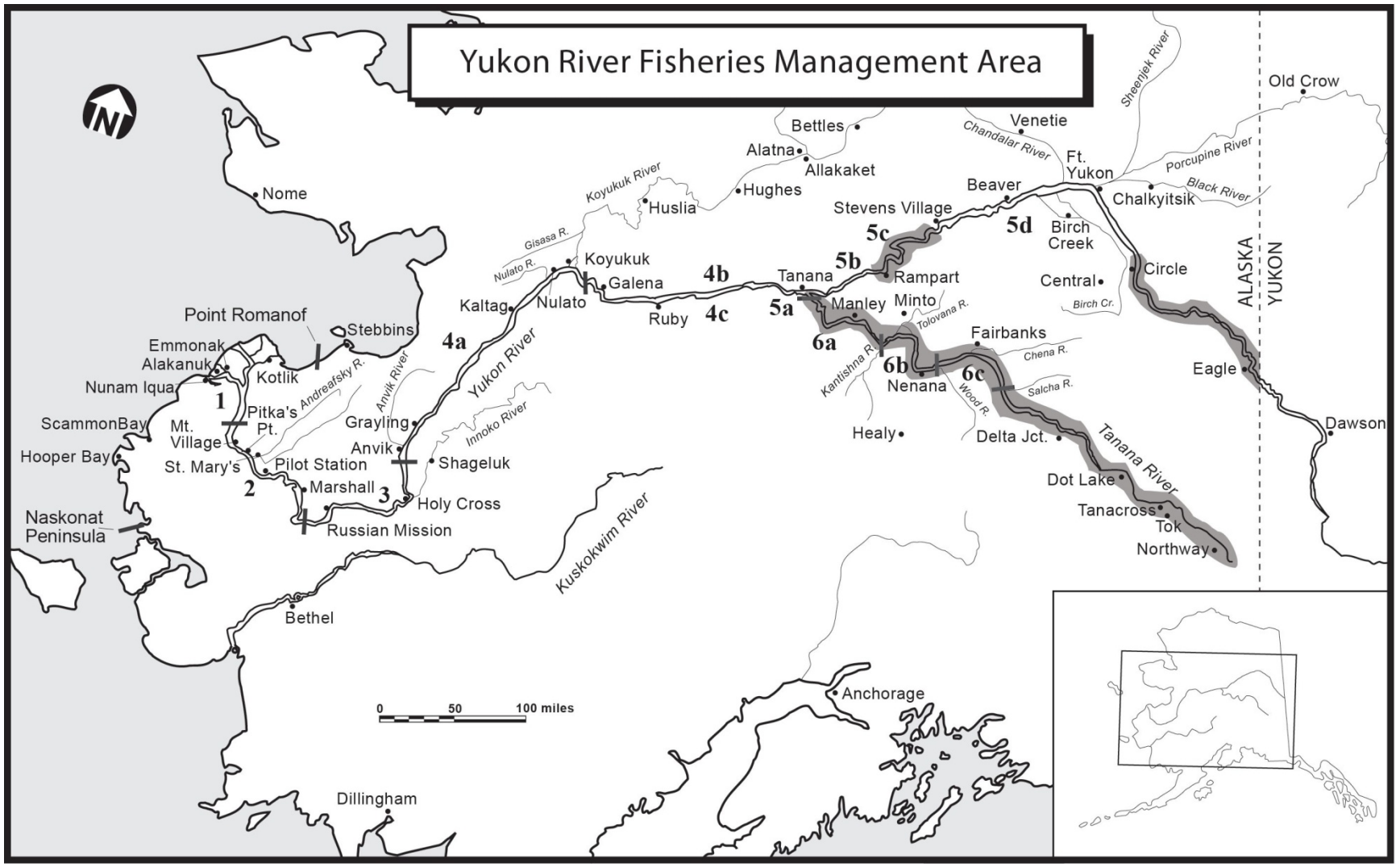
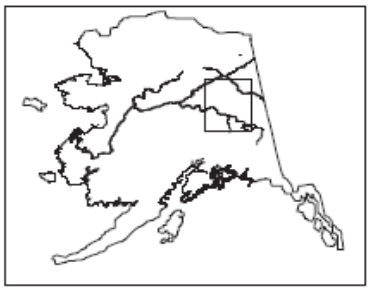


Figure 1.–Map of Alaska portion of Yukon River drainage showing communities and fishing districts. Subsistence and personal use permit areas are shaded.

5 AAC 99.015 JOINT BOARD NONSUBSISTENCE AREAS. (4) The Fairbanks Nonsubsistence Area is comprised of the following: within Unit 20(A) as defined by 5 AAC 92.450(20)(A) east of the Wood River drainage and south of the Rex Trail but including the upper Wood River drainage south of its confluence with Chicken Creek, within Unit 20(B) as defined by 5AAC 92.450(20)(B) the North Star Borough and that portion of the Washington Creek drainage east of the Elliot Highway, within 20(D) as defined by 5 AAC 92.450(20)(D) west of the Tanana River between its confluence's with the Johnson and Delta Rivers, west of the west bank of the Johnson River, and north and west of the Volkmar drainage, including the Goodpaster River drainage, and within Unit 25(C) as defined by 5 AAC 92.450(25)(C) the Preacher and Beaver Creek drainages.



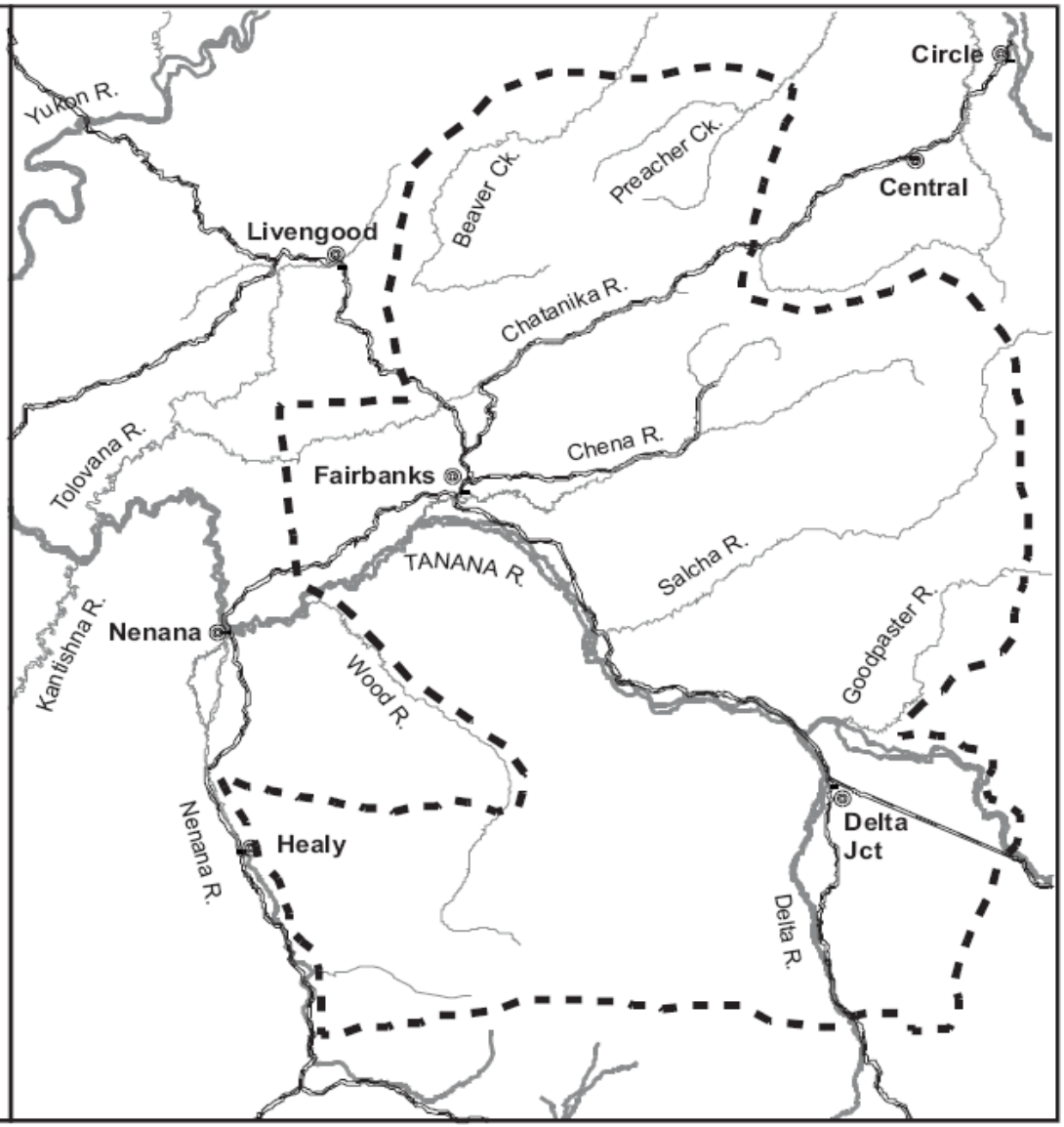


Figure 2.–Map of the Fairbanks Nonsubsistence Area.

2009 Yukon River Lamprey Harvest Survey

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES, FAIRBANKS
Telephone (907) 459-7274, Fax (907) 459-7271

The Alaska Department of Fish and Game would like your help to better manage the lamprey fishery in the Yukon River. Please fill out and return this pre-paid postcard to help us understand the importance of lamprey harvests to your household. Thank you for your assistance.

1. DID YOU FISH FOR LAMPREY (EELS) FROM SEPTEMBER THROUGH NOVEMBER, 2009? **YES** **NO**
(please circle)

2. PLEASE ESTIMATE THE AMOUNT OF LAMPREY CAUGHT AND DATE(S) OF HARVEST:

SUBSISTENCE _____ *POUNDS* **DATES:** _____

COMMERCIAL _____ *POUNDS* **DATES:** _____

3. PLEASE ESTIMATE THE AMOUNT OF SUBSISTENCE LAMPREY GIVEN AWAY AND/OR RECEIVED:

GIVEN AWAY_____ *POUNDS* **RECEIVED**_____ *POUNDS*

4. CIRCLE THE COMMUNITY NEAREST TO WHERE YOU FISHED:

MOUNTAIN VILLAGE *PITKAS POINT* *ST. MARYS* *PILOT STATION* *MARSHALL*

RUSSIAN MISSION *HOLY CROSS* *ANVIK* *GRAYLING*

OTHER COMMUNITY _____

Comments about the lamprey fishery? _____

Note: Yukon Area postseason subsistence Arctic lamprey harvest survey postcards were mailed November 2009 to all households in the communities listed in Districts Y-2, Y-3, and Subdistrict 4-A communities of Anvik and Grayling. Postcards were not sent to the community of Shageluk, which is located on the Innoko River. Surveys took place in these communities in September 2010, and asked about lamprey harvested in the winter of 2009.

Figure 3.–Supplemental postcard mailed to Arctic lamprey harvesting communities.

Date of Survey _____
Person Interviewed _____
Relation to HH _____
Interviewer _____

Community	LABEL	HHID#
Head of Household	LABEL	
Significant Other	LABEL	
Mailing Address	LABEL	Telephone#

2010 Yukon Area Post-Season Subsistence Salmon Harvest Survey

CONFIDENTIAL INFORMATION

1. **We would like to make sure we have the correct name and address for your household.**

Head of Household _____
Mailing Address _____ Telephone _____
Permanent Note _____
Significant Other _____ Permanent Note _____

2. **How many people live in your household?** _____
3. **Did anyone in your household harvest salmon for subsistence use OR keep fish for subsistence use from commercial fishing?** Yes ____ No ____ (Salmon caught during commercial openings but retained for subsistence. Harvest includes catching or cutting salmon) IF YES, COMPLETE ALL OF PART I, otherwise go to PART II.

Adult household member declined to be interviewed. [ ] Reason given: _____

PART I. HOUSEHOLDS THAT CAUGHT SALMON

4. **May I have your salmon catch calendar?** Yes ____ No ____ Already mailed ____ (Entire harvest on calendar? _____)
5. **How many total salmon did you or your fishing group catch?**

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

6. **How many households helped to catch these fish?** _____ (Names) _____

_____

***7. Where did you harvest your salmon? How many total salmon did your household harvest for subsistence purposes?**
(Include only fish caught by this household, not the group, includes fish kept from commercial periods.)

Ocean 1 2 3 4A 4B 4C 5A 5B 5C 5D (Ft Yukon ↑ or ↓) Innoko Koyukuk Chandalar Porcupine Black

Area _____ CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Area _____ CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Total (two areas) CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

8. **What is your household's primary type of salmon fishing gear?** ('Primary' is gear that catches the most salmon)

(1= primary, 2 = secondary) SET NET ____ DRIFT NET ____ FISH WHEEL ____ HOOK & LINE ____ OTHER _____

♦ 8A. **For households that harvested Chinook salmon: Estimate number of Chinook salmon caught by each gear type.**

SET NET _____ DRIFT NET _____ FISH WHEEL _____ HOOK & LINE _____ OTHER _____

9. **How many subsistence fish did your household retain from commercial fishing? (** ___ Did not commercial fish)

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

10. **Did your household "lose" any salmon? (e.g. to bears, birds, flies, spoilage, diseased fish, etc.)**
(If fish was not fit for humans but was fed to dogs, then it was not "lost.")

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Reason(s) for loss: _____

11. **Did your household share the salmon catch with any other households?** (names, species and numbers)

_____

_____

****12. How many salmon did you keep for your household's use?** (do not include fish given away or 'lost")

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Figure 4.–Yukon Area postseason subsistence salmon harvest survey form, 2010.

PART II. ALL HOUSEHOLDS

13. **Was your household given any salmon? Yes ____ No ____ Code: S=Subsistence, C=Commercial, T=Test Fish

Code: _____ Fishermen/Project (Name) _____

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Code: _____ Fishermen/Project (Name) _____

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

14. ALL HOUSEHOLDS: **How many salmon does your household usually harvest OR receive to meet its subsistence needs?** (This is linked to Question 7 or 13. If the household has no need for a species or usually does not harvest the species, indicate '0'. If needs were not met, ask about contributing factors.)

How many CHINOOK do you usually get? _____ Comment: _____

How many SUMMER CHUM do you usually get? _____ Comment: _____

How many FALL CHUM do you usually get? _____ Comment: _____

How many COHO do you usually get? _____ Comment: _____

15. Did your household catch any other fish besides salmon? Yes _____ No _____

(Harvest numbers should include from September/October of last year to now. Large Whitefish are 4 pounds or greater.)

LG WHITEFISH _____ SM WHITEFISH _____ SHEEFISH _____ BURBOT _____ PIKE _____ BLACKFISH _____

GRAYLING _____ SUCKERS _____ TROUT (Arctic Char) _____ EELS (Lamprey) _____ TOMCOD (Saffron) _____

16. How many sockeye (red) salmon did your household catch? _____ (Indicate '0' if household did not fish for sockeye)

17. How many dogs (including puppies) does your household have? _____ (if "none" go to question 21)

18. Do you feed whole salmon to your dogs? Yes _____ No _____ Only Feed Scraps ____ (if "No" go to question 21)

19. Were any of the salmon put up for the dogs from the commercial fishery? Yes _____ No _____

20. Estimate harvest of salmon put up for dogs this year by fishery (numbers should represent whole fish, not scraps):

(Subsistence) CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

(Commercial) CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

21. Do you have any additional comments? _____

_____

_____

_____

THANK YOU! THIS INFORMATION IS USED TO DOCUMENT THE SUBSISTENCE SALMON HARVEST WITHIN THE YUKON RIVER DRAINAGE AND TO TRY TO ENSURE THERE WILL BE ENOUGH SALMON FOR THE FUTURE.

Surveyor Comments:

Official Use - This area is to be filled in by Fish and Game.

HOUSEHOLD'S TOTAL SUBSISTENCE SALMON CATCH (Totals from question *7)

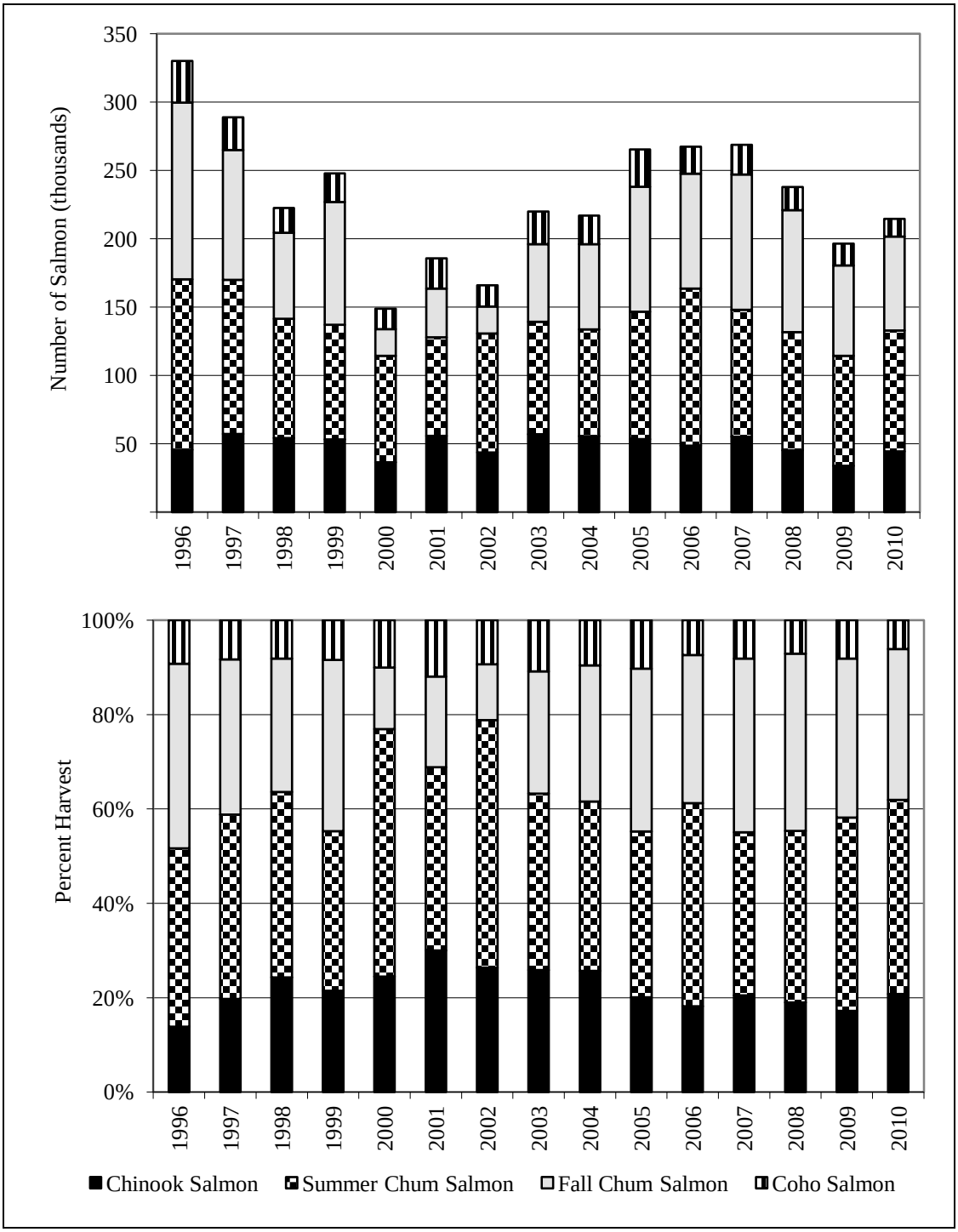
CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

HOUSEHOLD'S TOTAL SUBSISTENCE SALMON USE (Add totals from questions **12 and **13)

CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

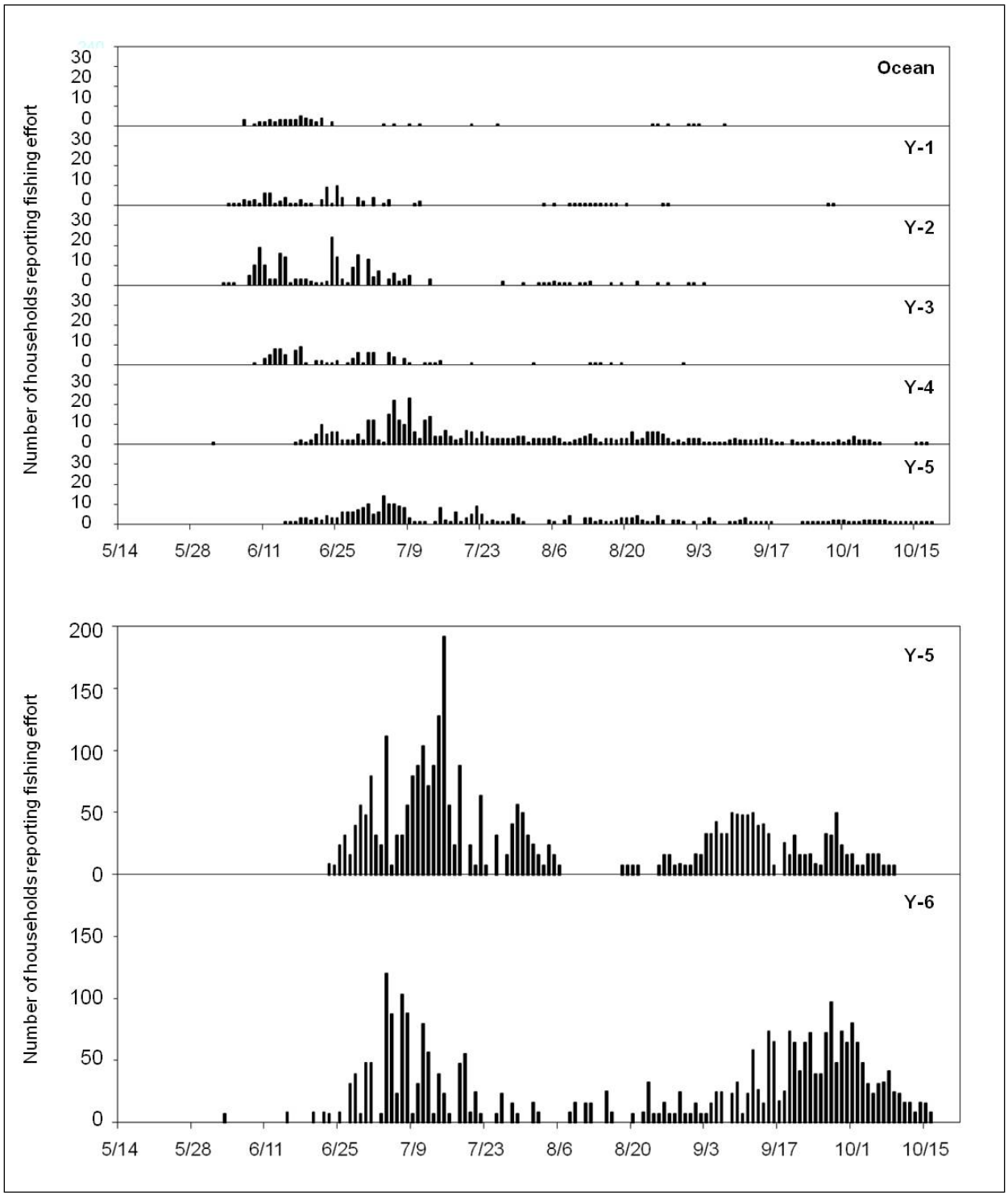
Complete Survey _____ Partial Survey _____ No Survey _____

Figure 4.–Page 2 of 2.



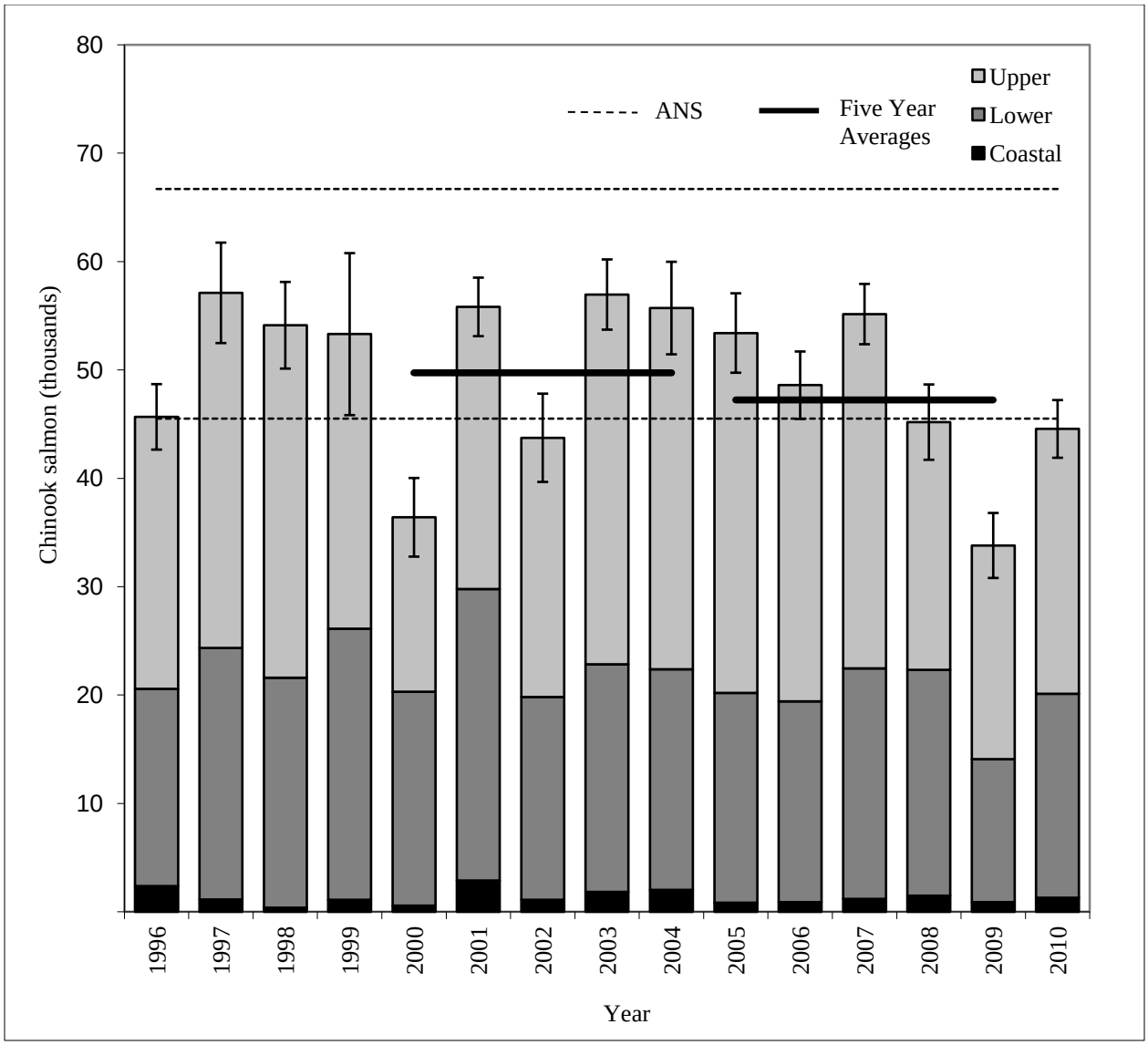
Note: Harvest of salmon species by number (top) and proportion (bottom). Totals include survey, permit, test fish and retained from commercial. Does not include salmon caught in the personal use fishery, or summer chum, fall chum, and coho salmon carcasses retained from the commercial fishery and used for subsistence. Does not include approximately 14,500 to 15,000 coho salmon obtained from Valdez Fisheries Development Association as part of Eagle's replacement subsistence salmon fishery in 2001 and 2003.

Figure 5.–Estimated total subsistence salmon harvest by species, Yukon Area, 1996–2010.



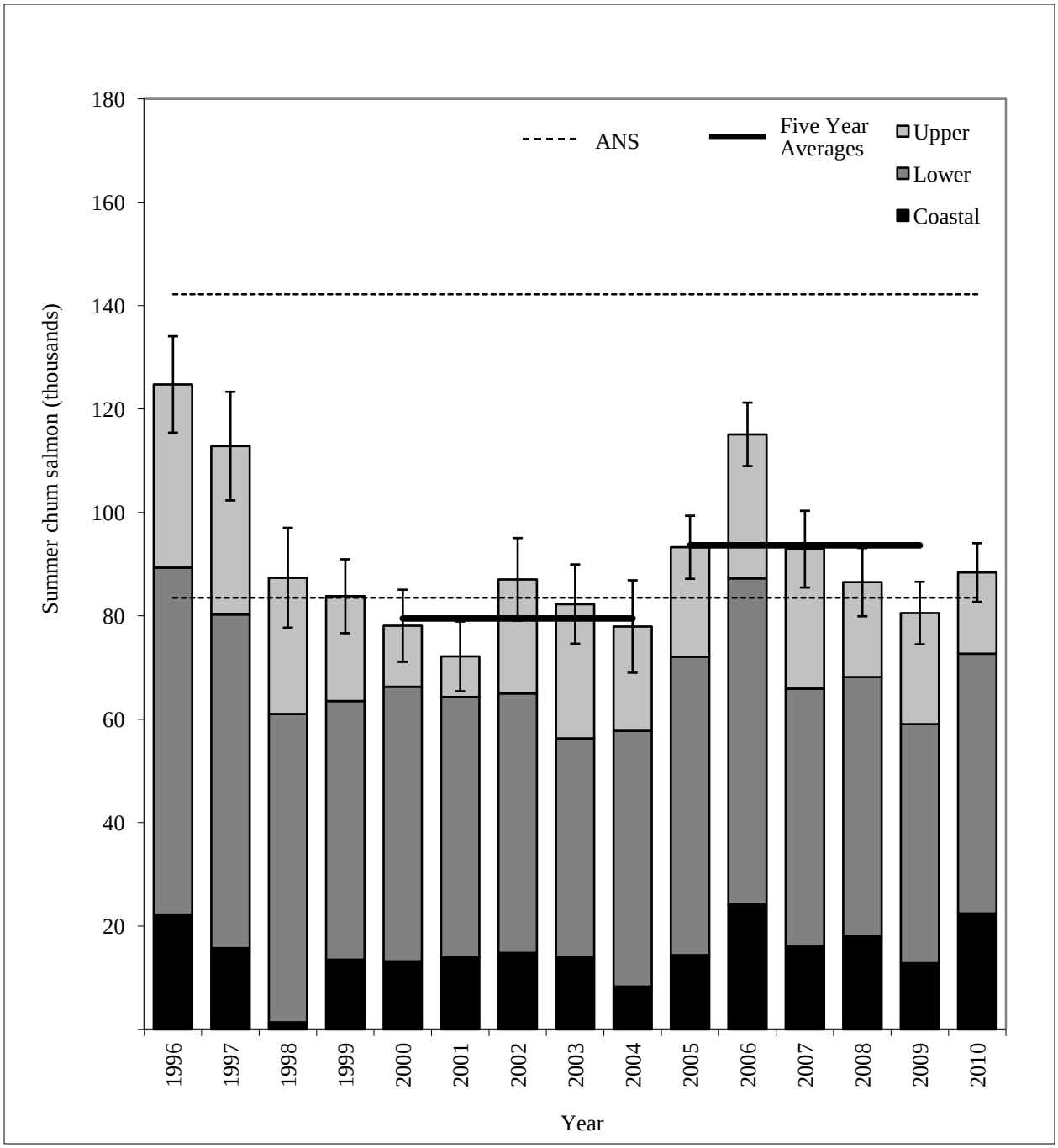
Note: Effort by day as recorded on returned harvest calendars (top), and subsistence salmon permits (bottom) Yukon Area 2009. District 5 contains calendars from surveyed communities and permit areas.

Figure 6.–Number of households reporting fishing effort by day and by district



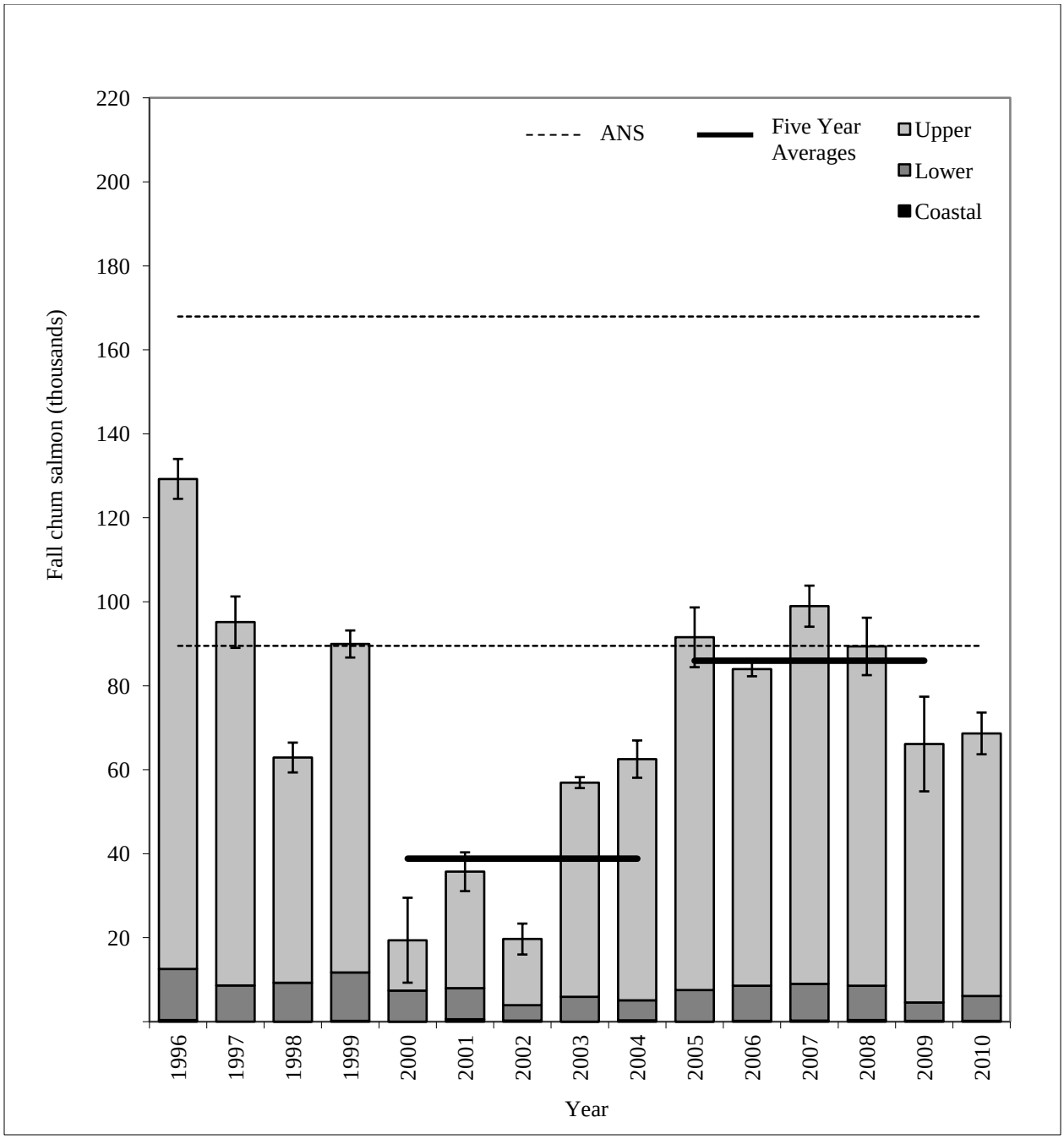
Note: Harvest estimates and 95% confidence interval are provided. In 2001 the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 45,500 to 66,704 Chinook salmon. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

Figure 7.–Estimated Chinook salmon subsistence harvest, Yukon Area, 1996–2010.



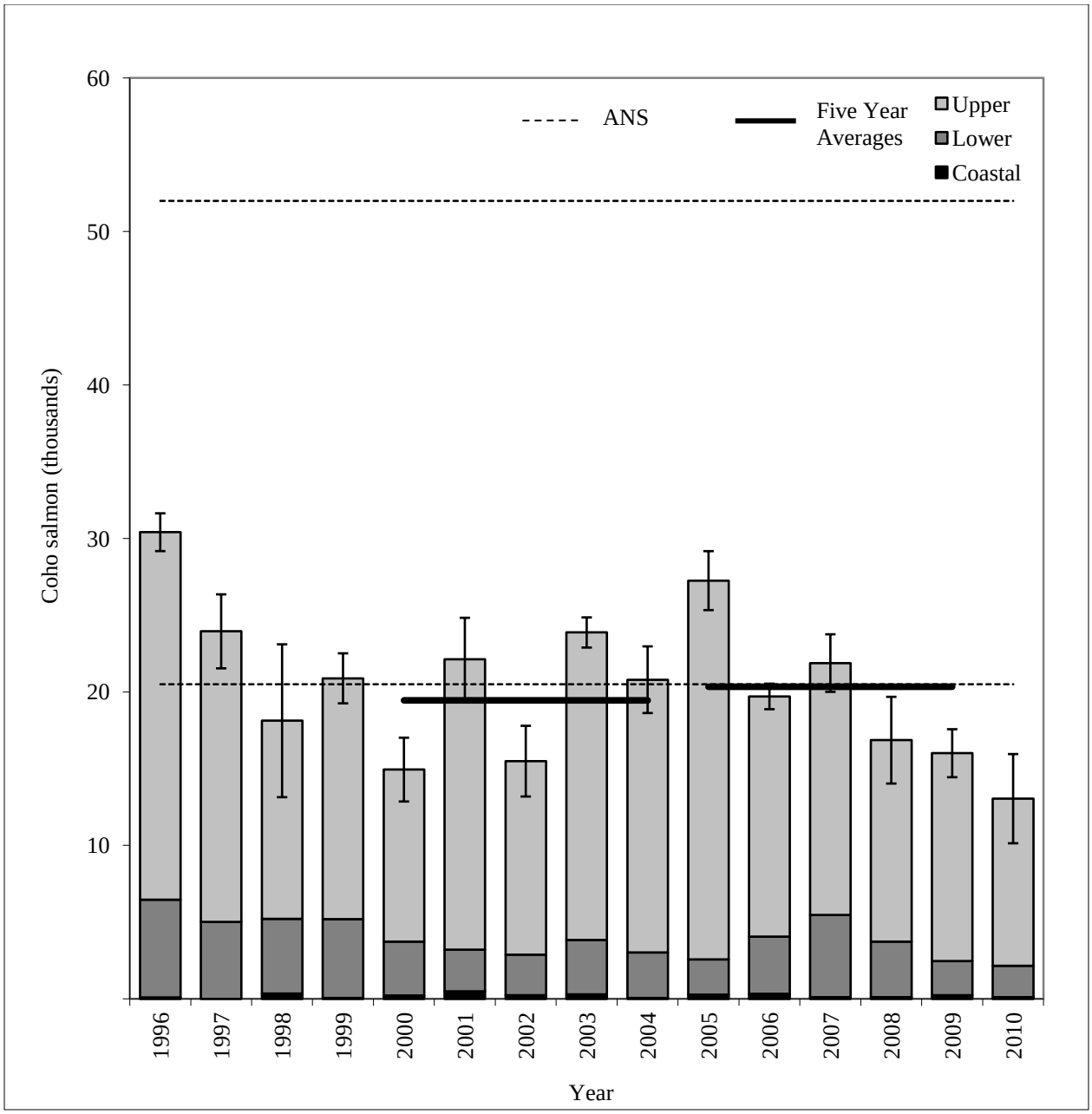
Note: Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 83,500 to 142,192 summer chum salmon. Does not include summer chum salmon carcasses retained from the commercial roe fishery (most significant in 1995 and 1996) and used for subsistence. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

Figure 8.–Estimated summer chum salmon subsistence harvest, Yukon Area, 1996–2010.



Note: Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 89,500 to 167,900 fall chum salmon. Does not include fall chum salmon sold commercially for roe and carcasses returned to fishermen in District 6. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

Figure 9.–Estimated fall chum salmon subsistence harvest, Yukon Area, 1996–2010.



Note: Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 20,500 to 51,980 coho salmon. Does not include carcasses returned to fishermen from coho salmon sold commercially for roe in District 6. Does not include approximately 14,500 to 15,000 coho salmon obtained from Valdez Fisheries Development Association as part of Eagle's replacement subsistence salmon fishery in 2003. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

Figure 10.–Estimated coho salmon subsistence harvest, Yukon Area, 1996–2010.

APPENDIX A. 2010 HARVEST INFORMATION

Appendix A1.–Estimated Chinook salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Hooper Bay	17	3	0.3	0.3	69	17	2.7	1.0	98	27	1.8	0.8	28	25	6.9	0.5	-	-	-	-	212	72	564	210
Scammon Bay	14	0	-	-	23	5	1.6	1.0	38	10	8.7	4.4	15	15	15.8	0.0	-	-	-	-	90	30	716	388
Coastal District	31	3	0.3	0.3	92	22	2.4	0.8	136	37	3.7	1.3	43	40	10.0	0.4	-	-	-	-	302	102	1,280	441
Nunam Iqua	9	3	0.0	0.0	8	8	0.4	0.0	10	10	11.7	0.0	10	7	28.4	4.6	-	-	-	-	37	28	404	91
Alakanuk	28	0	-	-	32	6	0.8	0.8	56	14	8.1	3.3	23	19	7.1	1.0	-	-	-	-	139	39	803	460
Emmonak	26	1	0.0	-	42	13	1.1	0.5	68	27	5.4	1.5	33	31	15.3	1.0	-	-	-	-	169	72	1,081	257
Kotlik	16	1	0.0	-	20	6	12.5	10.5	52	14	7.9	3.7	17	16	29.3	1.1	-	-	-	-	105	37	1,364	661
District 1	79	5	0.0	0.0	102	33	3.2	2.1	186	65	7.2	1.5	83	73	17.4	0.8	-	-	-	-	450	176	3,652	851
Mountain Village	27	0	-	-	31	8	1.4	0.8	70	23	4.8	1.0	32	28	16.9	0.7	1	1	15.0	-	161	60	1,125	183
Pitkas Point	1	0	-	-	7	5	7.6	4.1	14	11	20.4	3.0	5	5	44.0	0.0	-	-	-	-	27	21	580	104
St. Mary's	3	0	-	-	21	5	7.2	6.3	71	18	22.7	4.7	25	24	38.6	1.1	-	-	-	-	120	47	2,800	729
Pilot Station	12	1	0.0	-	33	17	1.8	1.2	50	25	12.4	1.8	16	14	31.9	2.9	-	-	-	-	111	57	1,330	239
Marshall	5	1	39.0	-	12	3	13.3	5.8	42	13	23.2	6.2	14	12	55.9	3.1	-	-	-	-	73	29	2,110	531
District 2	48	2	39.0	-	104	38	4.5	1.5	247	90	15.5	1.8	92	83	32.8	0.8	1	1	15.0	-	492	214	7,945	956
Russian Mission	4	0	-	-	16	5	0.6	0.5	37	9	16.2	4.1	8	7	32.1	2.3	-	-	-	-	65	21	924	318
Holy Cross	10	1	0.0	-	12	5	0.0	0.0	24	9	63.6	16.8	14	13	112.3	5.0	-	-	-	-	60	28	3,098	802
Shageluk	5	2	0.0	0.0	5	4	0.0	0.0	14	11	19.3	3.6	3	3	2.3	0.0	-	-	-	-	27	20	277	99
District 3	19	3	0.0	0.0	33	14	0.3	0.2	75	29	31.9	5.8	25	23	73.5	2.9	-	-	-	-	152	69	4,299	868
Anvik	2	2	19.0	0.0	9	6	6.3	3.7	9	8	28.1	3.7	6	5	70.2	8.4	2	1	150.0	-	28	22	1,069	135
Grayling	3	1	0.0	-	3	2	15.0	8.7	33	7	50.3	19.3	5	2	83.5	53.1	1	1	0.0	-	45	13	2,122	1,354
Kaltag	2	1	150.0	-	14	3	55.0	26.0	42	12	39.6	5.8	5	4	91.8	31.1	-	-	-	-	63	20	3,191	908
Nulato	1	1	75.0	-	20	4	29.3	15.2	55	15	40.5	6.3	3	3	34.3	0.0	-	-	-	-	79	23	2,989	905
Koyukuk	3	0	-	-	15	4	0.0	0.0	16	4	19.3	7.1	4	2	72.0	5.7	3	3	69.3	0.0	41	13	867	246
Galena	10	1	0.0	-	75	15	1.0	0.9	67	18	14.4	3.2	6	5	46.4	8.2	1	1	40.0	-	159	40	1,357	449
Ruby	6	1	45.0	-	35	8	10.6	9.3	14	5	21.0	13.2	1	1	26.0	-	2	1	70.0	-	58	16	1,102	736
Huslia	7	1	0.0	-	44	13	0.0	0.0	15	2	0.0	0.0	5	5	5.2	0.0	2	2	13.0	0.0	73	23	65	0
Hughes	10	0	-	-	11	11	0.0	0.0	6	4	1.5	0.9	3	3	11.0	0.0	-	-	-	-	30	18	63	15
Allakaket	14	1	0.0	-	32	8	0.1	0.1	7	2	0.5	0.4	2	1	0.0	-	3	3	13.3	0.0	58	15	63	12
Alatna	1	0	-	-	5	3	0.0	0.0	2	2	0.0	0.0	-	-	-	-	-	-	-	-	8	5	0	0
Bettles	11	2	0.0	0.0	16	14	0.0	0.0	1	0	-	-	-	-	-	-	-	-	-	-	28	16	0	0
District 4	70	11	22.0	0.0	279	91	6.8	2.1	267	79	29.4	3.3	40	31	51.3	7.9	14	12	53.9	0.0	670	224	12,888	2,074

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Appendix A1.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Tanana	7	2	0.0	0.0	42	11	0.0	0.0	30	8	24.6	10.7	8	6	160.8	33.1	11	10	108.1	11.1	98	37	3,215	851
Stevens Village	2	1	7.0	-	4	2	0.0	0.0	11	8	20.9	5.2	3	2	75.0	43.3	-	-	-	-	20	13	469	278
Birch Creek	2	0	-	-	10	4	2.5	1.9	4	3	9.7	4.8	-	-	-	-	-	-	-	-	16	7	73	61
Beaver	3	0	-	-	10	8	0.1	0.1	11	11	8.2	0.0	5	5	17.2	0.0	-	-	-	-	29	24	198	1
Fort Yukon	44	6	0.0	0.0	98	25	1.2	0.6	37	12	27.8	13.7	6	5	22.2	5.1	12	10	34.1	6.6	197	58	1,683	1,013
Venetie	27	1	0.0	-	37	7	0.0	0.0	14	5	7.4	5.9	3	2	136.0	78.5	-	-	-	-	81	15	767	734
Chalkyitsik	3	2	0.0	0.0	14	12	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	21	17	0	0
District 5	88	12	0.3	0.0	215	69	0.7	0.3	111	50	20.1	5.5	25	20	85.6	15.2	23	20	69.5	6.3	462	171	6,405	1,539
Survey Totals	335	36	6.7	0.0	825	267	3.7	0.8	1,022	350	17.6	1.2	308	270	35.5	1.7	38	33	62.3	3.8	2,528	956	36,469	3,042

Note: The number of Chinook salmon harvested was estimated using the total number of households (N), the number of households contacted (n), the average number of salmon harvested by households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Appendix A2.–Estimated summer chum salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total			
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Est Total	CI 95%
Hooper Bay	17	3	102.3	92.9	69	17	45.8	16.6	98	27	80.4	25.3	28	25	124.9	6.5	-	-	-	-	212	72	16,279	6,196
Scammon Bay	14	0	-	-	23	5	20.0	15.6	38	10	59.5	20.6	15	15	122.9	0.0	-	-	-	-	90	30	5,405	1,998
Coastal District	31	3	102.3	92.9	92	22	39.3	13.0	136	37	74.6	19.1	43	40	124.2	4.2	-	-	-	-	302	102	21,683	6,510
Nunam Iqua	9	3	0.0	0.0	8	8	0.6	0.0	10	10	63.5	0.0	10	7	162.7	20.9	-	-	-	-	37	28	2,267	411
Alakanuk	28	0	-	-	32	6	26.5	15.6	56	14	65.3	21.4	23	19	62.7	6.4	-	-	-	-	139	39	7,446	3,203
Emmonak	26	1	0.0	-	42	13	27.7	13.2	68	27	50.8	11.6	33	31	93.6	5.7	-	-	-	-	169	72	9,109	2,278
Kotlik	16	1	10.0	-	20	6	0.8	0.7	52	14	21.9	9.8	17	16	116.6	6.1	-	-	-	-	105	37	3,698	1,206
District 1	79	5	0.0	0.0	102	33	19.9	7.3	186	65	47.8	8.2	83	73	98.1	4.0	-	-	-	-	450	176	22,520	4,132
Mountain Village	27	0	-	-	31	8	14.4	8.6	70	23	29.8	7.5	32	28	99.6	5.0	1	1	10.0	-	161	60	6,886	1,431
Pitkas Point	1	0	-	-	7	5	2.4	1.3	14	11	20.9	4.9	5	5	60.0	0.0	-	-	-	-	27	21	633	140
St. Mary's	3	0	-	-	21	5	8.6	7.5	71	18	61.5	15.2	25	24	108.4	3.3	-	-	-	-	120	47	7,443	2,194
Pilot Station	12	1	0.0	-	33	17	1.8	1.2	50	25	64.9	13.5	16	14	62.4	7.5	-	-	-	-	111	57	4,823	1,511
Marshall	5	1	20.0	-	12	3	23.3	10.4	42	13	25.4	5.6	14	12	67.8	7.2	-	-	-	-	73	29	2,395	556
District 2	48	2	20.0	-	104	38	9.4	3.2	247	90	44.8	5.7	92	83	88.5	2.6	1	1	10.0	-	492	214	22,179	3,078
Russian Mission	4	0	-	-	16	5	0.0	0.0	37	9	8.7	2.7	8	7	21.9	1.4	-	-	-	-	65	21	528	214
Holy Cross	10	1	0.0	-	12	5	0.0	0.0	24	9	6.1	2.0	14	13	22.6	2.3	-	-	-	-	60	28	463	114
Shageluk	5	2	0.0	0.0	5	4	0.0	0.0	14	11	21.8	6.1	3	3	15.0	0.0	-	-	-	-	27	20	350	169
District 3	19	3	0.0	0.0	33	14	0.0	0.0	75	29	10.3	1.9	25	23	21.5	1.4	-	-	-	-	152	69	1,342	295
Anvik	2	2	2.5	0.0	9	6	0.8	0.5	9	8	8.4	2.1	6	5	52.2	13.7	2	1	25.0	-	28	22	451	165
Grayling	3	1	200.0	-	3	2	0.0	0.0	33	7	21.4	8.8	5	2	61.0	31.8	1	1	0.0	-	45	13	1,612	649
Kaltag	2	1	20.0	-	14	3	3.3	3.0	42	12	0.3	0.3	5	4	0.3	0.1	-	-	-	-	63	20	102	84
Nulato	1	1	8.0	-	20	4	4.0	2.1	55	15	5.6	1.6	3	3	6.7	0.0	-	-	-	-	79	23	416	188
Koyukuk	3	0	-	-	15	4	0.0	0.0	16	4	2.5	2.2	4	2	26.5	18.7	3	3	60.0	0.0	41	13	352	175
Galena	10	1	0.0	-	75	15	0.7	0.6	67	18	2.0	0.7	6	5	136.4	30.4	1	1	700.0	-	159	40	1,702	380
Ruby	6	1	55.0	-	35	8	16.5	14.5	14	5	31.4	20.5	1	1	0.0	-	2	2	312.0	0.0	58	17	1,971	1,143
Huslia	7	1	0.0	-	44	13	0.0	0.0	15	2	0.0	0.0	5	5	160.4	0.0	2	2	135.0	0.0	73	23	1,349	0
Hughes	10	0	-	-	11	11	0.0	0.0	6	4	0.0	0.0	3	3	195.0	0.0	-	-	-	-	30	18	878	0
Allakaket	14	1	0.0	-	32	8	7.6	6.5	7	2	125.0	105.6	2	1	10.0	-	3	3	344.7	0.0	58	15	2,864	1,984
Alatna	1	0	-	-	5	3	0.0	0.0	2	2	10.0	0.0	-	-	-	-	-	-	-	-	8	5	23	0
Bettles	11	2	0.0	0.0	16	14	0.0	0.0	1	0	-	-	-	-	-	-	-	-	-	-	28	16	0	0
District 4	70	11	31.7	0.0	279	91	3.6	2.0	267	79	10.4	3.4	40	31	74.3	6.7	14	13	204.1	0.0	670	225	11,720	2,431

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Appendix A2.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Tanana	7	2	0.0	0.0	42	11	0.0	0.0	30	8	0.5	0.4	8	6	3.5	1.0	11	10	164.8	22.5	98	37	1,856	487
Stevens Village	2	1	0.0	-	4	2	0.0	0.0	11	8	2.5	1.3	3	2	0.0	0.0	-	-	-	-	20	13	28	28
Birch Creek	2	0	-	-	10	4	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	7	0	0
Beaver	3	0	-	-	10	8	0.0	0.0	11	11	1.0	0.0	5	5	1.8	0.0	-	-	-	-	29	24	22	0
Fort Yukon	44	6	0.0	0.0	98	25	0.0	0.0	37	12	1.7	1.4	6	5	0.0	0.0	12	10	55.0	20.3	197	58	722	487
Venetie	27	1	0.0	-	37	7	0.0	0.0	14	5	0.0	0.0	3	2	0.0	0.0	-	-	-	-	81	15	0	0
Chalkyitsik	3	2	0.0	0.0	14	12	0.0	0.0	4	3	33.3	16.7	-	-	-	-	-	-	-	-	21	17	133	131
District 5	88	12	0.0	0.0	215	69	0.0	0.0	111	50	2.2	0.8	25	20	1.5	0.3	23	20	107.5	15.1	462	171	2,761	702
Survey Totals	335	36	21.2	11.9	825	267	9.3	1.9	1,022	350	33.5	3.4	308	270	81.7	1.7	38	34	140.5	9.1	2,528	957	82,206	8,684

Note: The number of summer chum salmon harvested was estimated using the total number of households (N), the number of households contacted (n), the average number of salmon harvested by households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Appendix A3.–Estimated fall chum salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Hooper Bay	17	3	0.0	0.0	69	17	1.2	1.0	98	27	0.0	0.0	28	25	1.2	0.4	-	-	-	-	212	72	116	140
Scammon Bay	14	0	-	-	23	5	0.0	0.0	38	10	0.9	0.5	15	15	1.7	0.0	-	-	-	-	90	30	70	40
Coastal District	31	3	0.0	0.0	92	22	0.9	0.8	136	37	0.3	0.1	43	40	1.4	0.3	-	-	-	-	302	102	186	145
Nunam Iqua	9	3	0.0	0.0	8	8	0.9	0.0	10	10	4.6	0.0	10	7	9.0	3.8	-	-	-	-	37	28	143	75
Alakanuk	28	0	-	-	32	6	0.0	0.0	56	14	7.1	6.2	23	19	8.3	2.0	-	-	-	-	139	39	739	858
Emmonak	26	1	0.0	-	42	13	0.0	0.0	68	27	3.3	2.4	33	31	16.7	2.5	-	-	-	-	169	72	915	428
Kotlik	16	1	0.0	-	20	6	0.0	0.0	52	14	0.0	0.0	17	16	0.0	0.0	-	-	-	-	105	37	0	0
District 1	79	5	0.0	0.0	102	33	0.1	0.0	186	65	3.6	2.1	83	73	10.0	1.2	-	-	-	-	450	176	1,797	962
Mountain Village	27	0	-	-	31	8	0.0	0.0	70	23	0.6	0.4	32	28	2.2	0.3	1	1	0.0	-	161	60	133	66
Pitkas Point	1	0	-	-	7	5	0.0	0.0	14	11	0.0	0.0	5	5	2.0	0.0	-	-	-	-	27	21	10	0
St. Mary's	3	0	-	-	21	5	0.0	0.0	71	18	0.7	0.5	25	24	13.0	0.9	-	-	-	-	120	47	387	89
Pilot Station	12	1	0.0	-	33	17	0.0	0.0	50	25	0.0	0.0	16	14	0.0	0.0	-	-	-	-	111	57	0	0
Marshall	5	1	0.0	-	12	3	0.0	0.0	42	13	1.0	0.8	14	12	1.0	0.3	-	-	-	-	73	29	56	69
District 2	48	2	0.0	-	104	38	0.0	0.0	247	90	0.5	0.2	92	83	4.6	0.3	1	1	0.0	-	492	214	586	130
Russian Mission	4	0	-	-	16	5	0.0	0.0	37	9	0.3	0.3	8	7	10.7	2.6	-	-	-	-	65	21	104	49
Holy Cross	10	1	0.0	-	12	5	0.0	0.0	24	9	0.9	0.7	14	13	0.0	0.0	-	-	-	-	60	28	21	33
Shageluk	5	2	0.0	0.0	5	4	0.0	0.0	14	11	0.0	0.0	3	3	400.0	0.0	-	-	-	-	27	20	1,200	0
District 3	19	3	0.0	0.0	33	14	0.0	0.0	75	29	0.4	0.3	25	23	51.4	0.8	-	-	-	-	152	69	1,325	59
Anvik	2	2	0.0	0.0	9	6	0.0	0.0	9	8	9.3	1.3	6	5	6.0	1.6	2	1	25.0	-	28	22	169	30
Grayling	3	1	0.0	-	3	2	0.0	0.0	33	7	3.9	3.4	5	2	9.0	7.0	1	1	30.0	-	45	13	202	232
Kaltag	2	1	0.0	-	14	3	10.0	5.1	42	12	10.8	8.4	5	4	12.5	5.6	-	-	-	-	63	20	658	709
Nulato	1	1	0.0	-	20	4	22.8	17.5	55	15	9.3	4.8	3	3	28.0	0.0	-	-	-	-	79	23	1,049	856
Koyukuk	3	0	-	-	15	4	0.0	0.0	16	4	0.0	0.0	4	2	81.0	57.3	3	3	136.7	0.0	41	13	792	484
Galena	10	1	0.0	-	75	15	0.0	0.0	67	18	12.4	7.1	6	5	72.4	14.6	1	1	700.0	-	159	40	1,968	949
Ruby	6	1	65.0	-	35	8	0.0	0.0	14	5	2.6	1.9	1	1	0.0	-	2	2	300.0	0.0	58	17	1,026	52
Huslia	7	1	20.0	-	44	13	0.0	0.0	15	2	0.0	0.0	5	5	27.0	0.0	2	2	22.5	0.0	73	23	403	0
Hughes	10	0	-	-	11	11	0.0	0.0	6	4	0.0	0.0	3	3	0.0	0.0	-	-	-	-	30	18	0	0
Allakaket	14	1	0.0	-	32	8	0.0	0.0	7	2	12.0	10.1	2	1	0.0	-	3	3	103.7	0.0	58	15	521	183
Alatna	1	0	-	-	5	3	0.0	0.0	2	2	0.0	0.0	-	-	-	-	-	-	-	-	8	5	0	0
Bettles	11	2	0.0	0.0	16	14	0.0	0.0	1	0	-	-	-	-	-	-	-	-	-	-	28	16	0	0
District 4	70	11	17.1	0.0	279	91	2.1	1.3	267	79	8.5	2.6	40	31	28.0	6.2	14	13	153.3	0.0	670	225	6,788	1,569

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	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Tanana	7	2	0.0	0.0	42	11	0.0	0.0	30	8	0.8	0.6	8	6	21.7	5.5	11	10	1,344.4	145.4	98	37	14,984	3,137
Stevens Village	2	1	0.0	-	4	2	0.0	0.0	11	8	68.8	23.6	3	2	650.0	375.3	-	-	-	-	20	13	2,706	2,265
Birch Creek	2	0	-	-	10	4	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	7	0	0
Beaver	3	0	-	-	10	8	0.0	0.0	11	11	3.0	0.0	5	5	0.0	0.0	-	-	-	-	29	24	37	0
Fort Yukon	44	6	0.0	0.0	98	25	1.8	1.4	37	12	4.2	3.4	6	5	15.0	6.1	12	10	465.1	53.4	197	58	6,006	1,309
Venetie	27	1	0.0	-	37	7	21.4	19.3	14	5	0.0	0.0	3	2	400.0	230.9	-	-	-	-	81	15	2,989	2,925
Chalkyitsik	3	2	0.0	0.0	14	12	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	21	17	0	0
District 5	88	12	0.0	0.0	215	69	4.5	3.4	111	50	8.7	2.6	25	20	136.5	52.9	23	20	885.6	74.9	462	171	26,722	5,024
Survey Totals	335	36	4.0	0.0	825	267	2.0	1.0	1,022	350	3.9	0.8	308	270	23.2	4.4	38	34	592.5	45.3	2,528	957	37,404	5,354

Note: The number of fall chum salmon harvested was estimated using the total number of households (N), the number of households contacted (n), the average number of salmon harvested by households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Appendix A4.–Estimated coho salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2010.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total			
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Est Total	CI 95%
Hooper Bay	17	3	0.0	0.0	69	17	0.0	0.0	98	27	0.0	0.0	28	25	1.6	0.5	-	-	-	-	212	72	45	29
Scammon Bay	14	0	-	-	23	5	0.0	0.0	38	10	0.3	0.2	15	15	3.7	0.0	-	-	-	-	90	30	79	16
Coastal District	31	3	0.0	0.0	92	22	0.0	0.0	136	37	0.1	0.1	43	40	2.3	0.3	-	-	-	-	302	102	124	33
Nunam Iqua	9	3	2.0	1.6	8	8	0.0	0.0	10	10	4.8	0.0	10	7	0.7	0.4	-	-	-	-	37	28	73	30
Alakanuk	28	0	-	-	32	6	3.0	2.7	56	14	3.6	3.1	23	19	2.7	0.9	-	-	-	-	139	39	449	478
Emmonak	26	1	0.0	-	42	13	0.0	0.0	68	27	0.1	0.1	33	31	4.2	0.6	-	-	-	-	169	72	174	45
Kotlik	16	1	6.0	-	20	6	0.0	0.0	52	14	0.0	0.0	17	16	2.3	0.4	-	-	-	-	105	37	46	18
District 1	79	5	2.0	1.6	102	33	0.9	0.8	186	65	1.4	0.9	83	73	3.0	0.4	-	-	-	-	450	176	742	481
Mountain Village	27	0	-	-	31	8	1.0	0.9	70	23	0.6	0.4	32	28	1.0	0.3	1	1	0.0	-	161	60	127	97
Pitkas Point	1	0	-	-	7	5	0.0	0.0	14	11	0.8	0.3	5	5	20.0	0.0	-	-	-	-	27	21	116	7
St. Mary's	3	0	-	-	21	5	0.0	0.0	71	18	0.8	0.4	25	24	1.4	0.2	-	-	-	-	120	47	92	53
Pilot Station	12	1	0.0	-	33	17	0.3	0.2	50	25	0.0	0.0	16	14	0.0	0.0	-	-	-	-	111	57	11	15
Marshall	5	1	0.0	-	12	3	0.0	0.0	42	13	0.2	0.2	14	12	1.7	0.6	-	-	-	-	73	29	33	23
District 2	48	2	0.0	-	104	38	0.4	0.3	247	90	0.5	0.2	92	83	2.1	0.1	1	1	0.0	-	492	214	379	114
Russian Mission	4	0	-	-	16	5	0.0	0.0	37	9	1.1	1.0	8	7	30.0	7.7	-	-	-	-	65	21	300	148
Holy Cross	10	1	0.0	-	12	5	0.0	0.0	24	9	0.0	0.0	14	13	0.0	0.0	-	-	-	-	60	28	0	0
Shageluk	5	2	0.0	0.0	5	4	0.0	0.0	14	11	3.8	1.2	3	3	0.0	0.0	-	-	-	-	27	20	53	33
District 3	19	3	0.0	0.0	33	14	0.0	0.0	75	29	1.3	0.5	25	23	9.6	2.5	-	-	-	-	152	69	353	152
Anvik	2	2	0.0	0.0	9	6	0.0	0.0	9	8	0.0	0.0	6	5	3.0	0.8	2	1	5.0	-	28	22	28	10
Grayling	3	1	0.0	-	3	2	0.0	0.0	33	7	4.0	3.6	5	2	0.0	0.0	1	1	0.0	-	45	13	132	230
Kaltag	2	1	0.0	-	14	3	0.0	0.0	42	12	0.0	0.0	5	4	0.0	0.0	-	-	-	-	63	20	0	0
Nulato	1	1	0.0	-	20	4	0.0	0.0	55	15	4.4	2.9	3	3	0.0	0.0	-	-	-	-	79	23	242	313
Koyukuk	3	0	-	-	15	4	0.0	0.0	16	4	0.0	0.0	4	2	5.0	3.5	3	3	71.7	0.0	41	13	254	30
Galena	10	1	0.0	-	75	15	0.0	0.0	67	18	1.4	0.7	6	5	76.0	16.4	1	1	0.0	-	159	40	549	215
Ruby	6	1	0.0	-	35	8	0.0	0.0	14	5	10.6	6.0	1	1	0.0	-	2	1	0.0	-	58	16	148	164
Huslia	7	1	0.0	-	44	13	0.0	0.0	15	2	0.0	0.0	5	5	10.0	0.0	2	2	90.0	0.0	73	23	289	0
Hughes	10	0	-	-	11	11	0.0	0.0	6	4	0.0	0.0	3	3	0.0	0.0	-	-	-	-	30	18	0	0
Allakaket	14	1	0.0	-	32	8	0.0	0.0	7	2	0.0	0.0	2	1	0.0	-	3	3	22.3	0.0	58	15	88	0
Alatna	1	0	-	-	5	3	0.0	0.0	2	2	0.0	0.0	-	-	-	-	-	-	-	-	8	5	0	0
Bettles	11	2	0.0	0.0	16	14	0.0	0.0	1	0	-	-	-	-	-	-	-	-	-	-	28	16	0	0
District 4	70	11	0.0	0.0	279	91	0.0	0.0	267	79	2.5	0.9	40	31	13.6	2.5	14	12	33.7	0.0	670	224	1,730	474

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Appendix A4.–Page 2 of 2.

	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	95%
Tanana	7	2	0.0	0.0	42	11	0.0	0.0	30	8	0.0	0.0	8	6	20.3	8.0	11	10	195.6	30.9	98	37	2,314	678
Stevens Village	2	1	0.0	-	4	2	0.0	0.0	11	8	37.5	19.6	3	2	5.0	2.9	-	-	-	-	20	13	428	423
Birch Creek	2	0	-	-	10	4	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	7	0	0
Beaver	3	0	-	-	10	8	0.0	0.0	11	11	0.1	0.0	5	5	0.0	0.0	-	-	-	-	29	24	1	0
Fort Yukon	44	6	0.0	0.0	98	25	0.0	0.0	37	12	0.0	0.0	6	5	0.0	0.0	12	10	20.3	8.3	197	58	244	195
Venetie	27	1	0.0	-	37	7	2.9	2.6	14	5	0.0	0.0	3	2	0.0	0.0	-	-	-	-	81	15	159	280
Chalkyitsik	3	2	0.0	0.0	14	12	0.0	0.0	4	3	66.7	33.3	-	-	-	-	-	-	-	-	21	17	267	261
District 5	88	12	0.0	0.0	215	69	0.5	0.4	111	50	6.1	2.3	25	20	7.1	2.6	23	20	104.1	15.4	462	171	3,413	907
Survey Totals	335	36	0.1	0.1	825	267	0.3	0.2	1,022	350	1.8	0.4	308	270	4.9	0.4	38	33	75.5	9.3	2,528	956	6,741	1,147

Note: The number of coho salmon harvested was estimated using the total number of households (N), the number of households contacted (n), the average number of salmon harvested by households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Appendix A5.–Estimated number of salmon provided to communities for subsistence use by test fish programs, Yukon Area, 2010.

Yukon River Test Fishery Sites	Community where fish were distributed	Chinook Salmon	Summer Chum Salmon	Fall Chum Salmon	Coho Salmon	Total Salmon
Lower Yukon Test Fish Gillnet (LYTF) [a]	Alakanuk	141	276	121	0	538
	Emmonak	1,113	1,809	803	188	3,913
	Hooper Bay	20	741	0	0	761
	Kotlik	950	567	481	192	2,190
LYTF Project Subtotal:		2,224	3,393	1,405	380	7,402
Mountain Village Test Fish Drift Gillnet	Mountain Village	476	185	0	0	661
Pilot Station Sonar Test Fish Drift Gillnet	Pilot Station	255	1,373	833	178	2,639
Eagle Sonar Test Fish Gillnet	Eagle	4	0	0	0	4
Test Fish Totals		2,959	4,951	2,238	558	10,706

[a] Includes both set and drift gillnet test fish catches.

Appendix A6.–Salmon reported lost in surveyed communities due to sick fish, weather, predators, and unknown causes, Yukon Area, 2010.

Reasons Given For Salmon Lost		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Pink Salmon		Total Reported Salmon Lost	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
LOST DUE TO SICK FISH													
Ichthyophonus h.		5	2.5%	20	3.2%	0	0.0%	3	0.0%	0	0.0%	28	2.2%
Cuts, bruises, rotten		7	3.5%	39	6.2%	80	19.5%	0	0.0%	0	0.0%	126	9.9%
Worms, pus, parasites		16	8.1%	22	3.5%	3	0.7%	0	0.0%	0	0.0%	41	3.2%
	Subtotal	28	14.1%	81	12.9%	83	20.2%	3	0.0%	0	0.0%	195	15.4%
LOST DUE TO WEATHER / SPOILAGE													
Spoilage, loss of freezer		122	61.6%	6	1.0%	5	1.2%	0	0.0%	0	0.0%	133	10.5%
Rain/Bad Weather		8	4.0%	396	63.1%	305	74.2%	5	0.0%	0	0.0%	714	56.4%
Insects		0	0.0%	63	10.0%	5	1.2%	10	0.0%	0	0.0%	78	6.2%
	Subtotal	130	65.7%	465	74.0%	315	76.6%	15	0.0%	0	0.0%	925	73.0%
LOST DUE TO ANIMALS													
Bears		2	1.0%	2	0.3%	0	0.0%	0	0.0%	0	0.0%	4	0.3%
Birds		2	1.0%	18	2.9%	10	2.4%	10	33.3%	0	0.0%	40	3.2%
Otters		5	2.5%	12	1.9%	0	0.0%	2	6.7%	0	0.0%	19	1.5%
Wolves/dogs		29	14.6%	7	1.1%	3	0.7%	0	0.0%	0	0.0%	39	3.1%
	Subtotal	38	19.2%	39	6.2%	13	3.2%	12	0.0%	0	0.0%	102	8.1%
LOST UNKNOWN	Subtotal	2	1.0%	43	6.8%	0	0.0%	0	0.0%	0	0.0%	45	3.6%
SALMON REPORTED LOST	Total	198		628		411		30		0		1,267	
Use of Lost salmon													
Salmon Fed to Dogs [a]		148	11.7%	106	8.4%	44	3.5%	20	1.6%	0	0.0%	318	25.1%
Salmon Lost to Humans and Dogs [b]		50	3.9%	522	41.2%	367	29.0%	10	0.8%	0	0.0%	949	74.9%
Total Salmon Lost [c]		198	15.6%	628	49.6%	411	32.4%	30	2.4%	0	0.0%	1,267	100.0%

[a] Salmon unfit for human consumption, but reported retained for dog food.

[b] Salmon lost and unfit for human consumptions and for dog food.

[c] A total of 79 surveyed households reported losing salmon.

Appendix A7.–Subsistence salmon fishing period reductions and gear restrictions, Yukon Area, 2010.

Date	District 1	District 2	District 3	Subdistrict 4-A	Subdistrict 4-B, 4-C	Subdistricts 5-A, B, C	Tanana District 6 [a]
6/7 [b]	Open 8pm	Open	Open	Open	Open	Open	Open 6pm
6/8	36-hr Period	Open	Open	Open	Open	Open	42-hr Period
6/9	Close 8am	Open 8pm	Open	Open	Open	Open	Close 12pm
6/10	Open 8pm	36-hr Period	Open	Open	Open	Open	Closed
6/11	36-hr Period	Close 8am	Open	Open	Open	Open	Open 6pm
6/12	Close 8am	Closed	Open	Open	Open	Open	42-hr Period
6/13	Closed	Open 8pm	Open 8pm	Open	Open	Open	Close 12pm
6/14	Open 8pm	36-hr Period	36-hr Period	Open	Open	Open	Open 6pm
6/15	36-hr Period	Close 8am	Close 8am	Open	Open	Open	42-hr Period
6/16	Close 8am	Open 8pm	Open 8pm	Open 6pm	Open	Open	Close 12pm
6/17	Open 8pm	36-hr Period	36-hr Period	48-hr Period	Open	Open	Closed
6/18	36-hr Period	Close 8am	Close 8am	Close 6 p.m.	Open	Open	Open 6pm
6/19	Close 8am	Closed	Closed	Closed	Open	Open	42-hr Period
6/20	Closed	Open 8pm	Open 8pm	Open 6pm	Open	Open	Close 12pm
6/21	Open 8pm	36-hr Period	36-hr Period	48-hr Period	Open	Open	Open 6pm
6/22	36-hr Period	Close 8am	Close 8am	Close 6 p.m.	Open	Open	42-hr Period
6/23	Close 8am	Open 8am	Open 8am	Open 6pm	Open 6pm	Open	Close 12pm
6/24	Open 8pm	36-hr Period	36-hr Period	48-hr Period	48-hr Period	Open	Closed
6/25	Close 12am	Close 8am	Close 8am	Close 6 p.m.	Close 6 p.m.	Open	Open 6pm
6/26	Closed	Closed	Closed	Closed	Closed	Open	42-hr Period
6/27	Closed	Open 8pm	Open 8pm	Open 6pm	Open 6pm	Open	Close 12pm
6/28	Closed	36-hr Period	36-hr Period	48-hr Period	48-hr Period	Open	Open 6pm
6/29	Open 12pm	Close 8am	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	42-hr Period
6/30	38-hr Period	Closed	Open 8am	Open 6pm	Open 6pm	48-hr Period	Close 12pm
7/1	Close 2am	Open 8pm	36-hr Period	48-hr Period	48-hr Period	Close 6 p.m.	Closed
7/2	Closed	46-hr Period	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	Open 6pm
7/3	Closed	Close 6pm	Closed	Closed	Closed	48-hr Period	42-hr Period
7/4	Open 12pm	Closed	Open 8pm	Open 6pm	Open 6pm	Close 6 p.m.	Close 12pm
7/5	Close 6pm	Open 6am	36-hr Period	48-hr Period	48-hr Period	Closed	Open 6pm
7/6	Closed	Close 6pm	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	42-hr Period
7/7	Open 6am	Closed	Open 8pm	Open 6pm	Open 6pm	48-hr Period	Close 12pm
7/8	Closed 12am	Open 6am	36-hr Period	48-hr Period	48-hr Period	Close 6 p.m.	Closed
7/9	Open 3pm	Close 12am	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	Open 6pm
7/10	Close 12am	Closed	Closed	Closed	Closed	48-hr Period	42-hr Period
7/11	Closed	Open	Open 8pm	Open 6pm	Open 6pm	Close 6 p.m.	Close 12pm
7/12	Open 9am-9pm	Closed 12am	36-hr Period	48-hr Period	48-hr Period	Closed	Open 6pm
7/13	Closed	Open 12pm	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	42-hr Period
7/14	Open 12pm-9pm	Closed	Open 8pm	Open 6pm	Open 6pm	48-hr Period	Close 12pm
7/15	Closed	Open 12pm	36-hr Period	48-hr Period	48-hr Period	Close 6 p.m.	Closed
7/16	Open 12pm	Closed 12am	Close 8am	Close 6 p.m.	Close 6 p.m.	Open 6pm	Open 6pm
7/17	Open	Open 3pm	Closed	Closed	Closed	48-hr Period	42-hr Period
7/18	Open	Open	Open 8pm	Open 6pm	Open 6pm	Close 6 p.m.	Close 12pm
7/19	Open	Open	Open	48-hr Period	48-hr Period	Closed	Open 6pm
7/20	Open	Open	Open	Close 6 p.m.	Close 6 p.m.	Open 6pm	42-hr Period
7/21	Open	Open	Open	Open 6pm	Open 6pm	48-hr Period	Close 12pm
7/22	Open	Open	Open	48-hr Period	48-hr Period	Close 6 p.m.	Closed
7/23	Open	Open	Open	Close 6 p.m.	Close 6 p.m.	Open 6pm	Open 6pm
7/24	Open	Open	Open	Closed	Closed	48-hr Period	42-hr Period
7/25	Open	Open	Open	Open 6pm	Open	Close 6 p.m.	Close 12pm
7/26	Open	Open	Open	Open 5 days	Open 5 days	Closed	Open 6pm
7/27 [c]	Open	Open	Open	per week	per week	Open 6pm	42-hr Period

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Appendix A7.–Page 2 of 2.

Date	District 1	District 2	District 3	District 4	Subdistricts 5-A, B, C	Tanana 6-A, 6-B, 6-C [a]
8/15 [c]	Open	Open	Open	Open	Open	Close 12pm
8/16	7 days/week	7 days/week	7 days/week	7 days/week	7 days/week	Open 6pm
8/17	Open	Open	Open	Open	Open	42-hr Period
8/18	Close 8am	Open	Open	Open	Open	Close 12pm
8/19	Open 8pm	Open	Open	Open	Open	Closed
8/20	36-hr Period	Close 8am	Close 8am	Close 8am	Open	Open 6pm
8/21	Close 8am	Closed	Closed	Closed	Open	42-hr Period
8/22	Closed	Open 10pm	Open 10pm	Open 6pm	Close 6 pm	Close 12pm
8/23	Closed	36-hr Period	36-hr Period	48-hr Period	Closed	Open 6pm
8/24	Closed	Close 8am	Close 8am	Close 6pm	Open 6 pm	42-hr Period
8/25	Closed	Closed	Closed	Open 6pm	48-hr Period	Close 12pm
8/26	Open 8pm	Closed	Closed	48-hr Period	Close 6pm	Closed
8/27	36-hr Period	Closed	Closed	Close 6pm	Open 6pm	Open 6pm
8/28	Close 8am	Closed	Closed	Closed	48-hr Period	42-hr Period
8/29	Closed	Open 8pm	Open 8pm	Closed	Close 6pm	Close 12pm
8/30	Open 8pm	36-hr Period	36-hr Period	Closed	Closed	Open 6pm
8/31	36-hr Period	Close 8am	Close 8am	Closed	Open 6pm	42-hr Period
9/1	Close 8am	Open 10pm	Open 10pm	Open 6pm	48-hr Period	Close 12pm
9/2	Open 8pm	36-hr Period	36-hr Period	48-hr Period	Close 6pm	Closed
9/3	36-hr Period	Close 8am	Close 8am	Close 6pm	Closed	Open 6pm
9/4	Close 8am	Closed	Closed	Closed	Closed	42-hr Period
9/5	Closed	Open 8pm	Open 8pm	Open 6pm	Closed	Close 12pm
9/6	Open 8pm	Open	Open	Open	Closed	Open 6pm
9/7	Close 10pm	Open	7 days/week	7 days/week	Open 6pm	42-hr Period
9/8	Closed	Open	Open	Open	48-hr Period	Close 12pm
9/9	Open 7am-10pm	Close 10pm	Open	Open	Close 6pm	Closed
9/10	Closed	Closed	Open	Open	Open 6pm	Open 6pm
9/11	Open 7am	Open 7am	Open	Open	48-hr Period	42-hr Period
9/12	Open	Open	Open	Open	Close 6pm	Close 12pm
9/13	7 days/week	7 days/week	Open	Open	Closed	Open 6pm
9/14	Open	Open	Open	Open	Open 6pm	42-hr Period
9/15	Open	Open	Open	Open	48-hr Period	Close 12pm
9/16	Open	Open	Open	Open	Close 6pm	Closed
9/17	Open	Open	Open	Open	Open 6pm	Open 6pm
9/18	Open	Open	Open	Open	48-hr Period	42-hr Period
9/19	Open	Open	Open	Open	Close 6pm	Close 12pm
9/20	Open	Open	Open	Open	Closed	Open 6pm
9/21	Open	Open	Open	Open	Open 6pm	42-hr Period
9/22	Open	Open	Open	Open	120-hr Period	Close 12pm
9/23	Open	Open	Open	Open	Open	Closed
9/24	Open	Open	Open	Open	Open	Open 6pm
9/25	Open	Open	Open	Open	Open	42-hr Period
9/26	Open	Open	Open	Open	Close 6pm	Close 12pm
9/27	Open	Open	Open	Open	Closed	Open 6pm
9/28	Open	Open	Open	Open	Open 6pm	42-hr Period
9/29	Open	Open	Open	Open	120-hr Period	Close 12pm
9/30	Open	Open	Open	Open	Open	Closed

Note: Shaded areas indicate fishery closures and gear restrictions implemented inseason beyond regulatory windows. Unshaded fishing period closures follow regulations by district, including those closures relating to commercial fisheries openings. The Coastal District, Innoko River, Koyukuk River and Subdistrict 5-D remained open 7 days per week. No mesh size restrictions were enacted in 2010.

[a] The Old Minto Area of Subdistrict 6-B remained open 5 days per week.

[b] From June 1 to June 7 all district and subdistricts were open.

[c] From July 27 to August 3 all subdistricts were on regulatory schedules as follows: District 1, 2, and were open 24 hours per day, 7 days a week. District 4 was open 5 days per week. Subdistricts 5-A, 5-B, and 5-C were open for two 48 hour periods per week, Subdistrict 5-D remained open 24 hours per day, 7 days per week. From August 4 to August 15, all Districts and Subdistricts were open 24 hours a day, 7 days per week.

APPENDIX B. HISTORICAL INFORMATION

Appendix B1.–Chinook salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 2000–2010.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Hooper Bay	114	2,150	282	722	1,042	157	376	430	388	183	584	862	307
Scammon Bay	449	732	840	1,128	996	691	507	768	1,104	722	716	829	758
Coastal District Total	563	2,882	1,122	1,850	2,038	848	883	1,198	1,492	905	1,300	1,691	1,065
Nunam Iqua	684	550	393	925	647	338	371	907	163	200	404	640	396
Alakanuk	1,109	973	1,773	1,707	1,317	860	690	1,257	1,238	634	944	1,376	936
Emmonak	2,205	2,473	1,751	2,763	2,768	1,730	2,311	2,326	2,696	1,634	2,194	2,392	2,139
Kotlik	1,893	3,093	1,686	937	1,148	2,130	1,750	1,569	2,066	1,657	2,314	1,751	1,834
District 1 Subtotal	5,891	7,089	5,603	6,332	5,880	5,058	5,122	6,059	6,163	4,125	5,856	6,159	5,305
Mountain Village	1,715	1,864	1,523	2,174	2,362	2,383	1,659	2,077	1,645	1,482	1,601	1,928	1,849
Pitkas Point	753	651	566	633	609	618	274	320	544	265	580	642	404
St. Mary's	1,810	3,815	2,045	1,916	2,357	2,693	2,233	3,573	1,756	1,929	2,800	2,389	2,437
Pilot Station	2,378	2,614	2,530	2,886	2,406	1,658	1,976	2,028	1,597	1,258	1,585	2,563	1,703
Marshall	3,279	4,498	2,290	2,059	1,990	1,804	1,897	2,555	3,284	1,201	2,110	2,823	2,148
District 2 Subtotal	9,935	13,442	8,954	9,668	9,724	9,156	8,039	10,553	8,826	6,135	8,676	10,345	8,542
Russian Mission	1,860	3,428	1,887	2,057	2,337	1,894	1,851	1,301	2,949	978	924	2,314	1,205
Holy Cross	1,249	2,711	1,813	2,395	1,993	2,817	3,165	2,902	2,509	1,745	3,098	2,032	2,628
Shageluk	805	222	439	550	418	420	358	448	397	201	277	487	365
District 3 Subtotal	3,914	6,361	4,139	5,002	4,748	5,131	5,374	4,651	5,855	2,924	4,299	4,833	4,787
Lower Yukon River Total	19,740	26,892	18,696	21,002	20,352	19,345	18,535	21,263	20,844	13,184	18,831	21,336	18,634
Anvik	205	608	708	1,286	1,588	1,206	958	1,321	1,433	796	1,069	879	1,143
Grayling	839	1,077	2,249	1,613	1,869	1,878	1,702	1,500	1,761	1,133	2,122	1,529	1,595
Kaltag	1,074	1,506	1,435	1,838	1,656	3,367	2,833	1,456	2,403	1,970	3,191	1,502	2,406
Nulato	1,083	2,127	1,773	2,531	5,199	2,749	2,707	2,431	1,250	1,551	2,989	2,543	2,138
Koyukuk	175	449	323	860	400	396	835	811	513	982	867	441	707
Galena	788	1,755	1,522	3,112	3,296	2,864	2,380	2,511	2,232	1,370	1,357	2,095	2,271
Ruby/Kokrines	1,577	2,033	954	631	1,620	1,193	304	1,594	637	542	1,102	1,363	854
District 4 Subtotal	5,741	9,555	8,964	11,871	15,628	13,653	11,719	11,624	10,229	8,344	12,697	10,352	11,114
Huslia	424	377	222	469	285	207	258	146	255	969	65	355	367
Hughes	50	144	67	113	291	33	8	8	61	101	63	133	42
Allakaket	41	76	200	306	65	68	23	53	58	90	63	138	58
Alatna	8	0	3	12	0	0	14	0	16	10	0	5	8
Bettles	0	0	0	0	0	3	0	0	0	0	0	0	1
Koyukuk River Subtotal	523	597	492	900	641	311	303	207	390	1,170	191	631	476
District 4 Total (Incl. Koyukuk R.)	6,264	10,152	9,456	12,771	16,269	13,964	12,022	11,831	10,619	9,514	12,888	10,982	11,590

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Appendix B1.–Page 2 of 2.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Tanana	2,895	4,112	2,379	5,332	2,689	3,729	3,794	5,498	3,981	2,950	3,215	3,481	3,990
Rampart [a]	847	1,857	852	1,411	287	411	429	250	136	528	262	1,051	351
Fairbanks [b]	1,342	1,125	1,767	1,932	1,997	2,584	2,184	2,510	1,898	1,509	1,670	1,633	2,137
Stevens Village	466	1,111	1,334	1,121	2,394	1,570	1,245	610	753	405	469	1,285	917
Birch Creek	72	0	67	78	82	131	174	113	32	15	73	60	93
Beaver	196	1,368	702	1,156	858	957	830	1,244	546	516	198	856	819
Fort Yukon	988	2,361	2,348	4,004	4,430	3,591	3,144	4,076	1,991	846	1,683	2,826	2,730
Circle	627	447	1,533	895	565	1,283	694	1,057	519	372	324	813	785
Central	26	84	58	144	83	175	130	334	48	167	90	79	171
Eagle	1,087	1,033	1,910	2,081	1,512	2,566	2,303	1,999	1,068	446	867	1,525	1,676
Other [c]	205	40	348	862	357	315	330	472	362	541	779	362	404
District 5 Subtotal (Excluding Chandalar and Black Rivers)	8,751	13,538	13,298	19,016	15,254	17,312	15,257	18,163	11,334	8,295	9,630	13,971	14,072
Venetie	103	28	77	125	352	59	667	1,002	292	622	767	137	528
Chalkyitsik	0	0	26	50	60	53	0	0	0	0	0	27	11
Chandalar/Black River Subtotal	103	28	103	175	412	112	667	1,002	292	622	767	164	539
District 5 Total	8,854	13,566	13,401	19,191	15,666	17,424	15,924	19,165	11,626	8,917	10,397	14,136	14,611
Manley	58	534	336	213	239	289	361	333	106	345	337	276	287
Minto	0	197	19	317	35	35	31	82	12	0	43	114	32
Nenana	541	1,405	509	1,193	633	533	712	893	322	458	658	856	584
Fairbanks [d]	360	191	159	392	449	971	125	409	108	396	91	310	402
Other [e]	24	0	44	30	32	0	0	0	57	86	14	26	29
District 6 Tanana R. Total	983	2,327	1,067	2,145	1,388	1,828	1,229	1,717	605	1,285	1,143	1,582	1,333
Upper Yukon River Total	16,101	26,045	23,924	34,107	33,323	33,216	29,175	32,713	22,850	19,716	24,428	26,700	27,534
Alaska, Yukon River Total [f]	35,841	52,937	42,620	55,109	53,675	52,561	47,710	53,976	43,694	32,900	43,259	48,036	46,168
Alaska, Yukon Area Total	36,404	55,819	43,742	56,959	55,713	53,409	48,593	55,174	45,186	33,805	44,559	49,727	47,233

Note: Estimates from 2006 and 2007 are preliminary. Does not include harvests from personal use permits.

[a] Rampart area harvest as reported from subsistence fishing permits established by the Board of Fisheries (BOF) in 2004.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvest by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permit holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District.

Appendix B2.–Summer chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 2000–2010.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Hooper Bay	9,301	12,593	9,780	10,658	3,242	9,771	19,468	12,234	12,007	9,195	17,020	9,115	12,535
Scammon Bay	3,876	1,323	5,016	3,310	5,020	4,586	4,703	3,887	6,113	3,602	5,405	3,709	4,578
Coastal District Total	13,177	13,916	14,796	13,968	8,262	14,357	24,171	16,121	18,120	12,797	22,425	12,824	17,113
Nunam Iqua	3,309	1,942	1,897	2,561	2,698	2,794	2,903	2,325	1,949	2,280	2,267	2,481	2,450
Alakanuk	6,259	5,992	7,637	5,287	6,555	5,687	7,790	7,611	6,881	5,152	7,722	6,346	6,624
Emmonak	8,338	8,242	8,458	7,644	8,618	12,594	11,899	9,256	9,646	9,038	10,918	8,260	10,487
Kotlik	6,173	6,595	6,115	4,209	2,749	6,620	5,289	5,017	4,291	7,528	4,265	5,168	5,749
District 1 Subtotal	24,079	22,771	24,107	19,701	20,620	27,695	27,881	24,209	22,767	23,998	25,172	22,256	25,310
Mountain Village	7,074	8,484	6,657	6,497	10,676	8,861	13,119	8,104	7,559	7,204	7,071	7,878	8,969
Pitkas Point	1,728	862	639	800	717	1,023	680	515	1,246	994	633	949	892
St. Mary's	8,094	10,026	7,284	4,521	6,994	6,877	7,394	8,107	6,451	5,831	7,443	7,384	6,932
Pilot Station	5,223	5,329	6,490	4,163	5,779	4,333	6,070	3,711	6,012	4,888	6,196	5,397	5,003
Marshall	3,212	1,602	2,484	792	1,765	3,183	4,392	3,070	3,023	2,172	2,395	1,971	3,168
District 2 Subtotal	25,331	26,303	23,554	16,773	25,931	24,277	31,655	23,507	24,291	21,089	23,738	23,578	24,964
Russian Mission	1,318	165	395	171	884	925	1,328	759	2,400	849	528	587	1,252
Holy Cross	569	460	155	214	276	760	825	320	441	194	463	335	508
Shageluk	1,800	684	1,956	5,473	1,798	4,081	1,381	977	130	103	350	2,342	1,334
District 3 Subtotal	3,687	1,309	2,506	5,858	2,958	5,766	3,534	2,056	2,971	1,146	1,341	3,264	3,095
Lower Yukon River Total	53,097	50,383	50,167	42,332	49,509	57,738	63,070	49,772	50,029	46,233	50,251	49,098	53,368
Anvik	425	94	1,089	844	248	529	387	5,250	340	277	451	540	1,357
Grayling	474	92	1,311	1,072	1,129	783	644	641	660	1,429	1,612	816	831
Kaltag	169	10	234	1,028	213	680	159	109	916	50	102	331	383
Nulato	377	208	269	180	198	634	838	356	468	133	416	246	486
Koyukuk	204	118	426	1,339	329	537	394	995	1,104	1,378	352	483	882
Galena	820	53	712	289	782	1,013	1,205	571	758	1,718	1,702	531	1,053
Ruby/Kokrines	1,233	1,025	1,406	876	2,010	967	1,714	416	655	603	1,971	1,310	871
District 4 Subtotal	3,702	1,600	5,447	5,628	4,909	5,143	5,341	8,338	4,901	5,588	6,606	4,257	5,862
Huslia	745	833	3,178	6,187	3,844	2,433	1,122	3,243	4,377	2,554	1,349	2,957	2,746
Hughes	1,079	551	1,089	1,265	3,823	2,230	3,254	1,213	944	1,723	878	1,561	1,873
Allakaket	1,520	1,604	6,242	4,383	2,367	2,535	5,170	3,451	3,229	4,924	2,864	3,223	3,862
Alatna	0	0	15	50	16	5	110	11	66	163	23	16	71
Bettles	0	0	0	0	0	4	0	0	0	6	0	0	2
Koyukuk River Subtotal	3,344	2,988	10,524	11,885	10,050	7,207	9,656	7,918	8,616	9,370	5,114	7,758	8,553
District 4 Total(Incl. Koyukuk R)	7,046	4,588	15,971	17,513	14,959	12,350	14,997	16,256	13,517	14,958	11,720	12,015	14,416

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Appendix B2.–Page 2 of 2.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Tanana	2,848	1,407	3,321	3,075	1,490	4,832	5,474	5,229	2,877	4,665	1,856	2,428	4,615
Rampart [a]	47	0	14	9	103	315	135	25	27	112	161	35	123
Fairbanks [b]	275	165	295	89	280	780	1,341	564	119	44	427	221	570
Stevens Village	50	0	12	0	108	442	972	254	163	6	28	34	367
Beaver	7	328	77	7	2	68	117	41	27	22	22	84	55
Fort Yukon	0	289	1,832	2,176	1,187	67	2,165	2,365	230	275	722	1,097	1,020
Circle	109	6	5	85	52	3	58	200	5	0	37	51	53
Central	1	0	0	0	0	5	2	0	0	2	0	0	2
Eagle	121	555	24	104	171	235	974	15	14	0	25	195	248
Other [c]	51	0	17	0	3	53	117	81	25	29	144	14	61
District 5 Subtotal (Excluding Chandalar and Black Rivers)	3,509	2,750	5,597	5,545	3,396	6,800	11,355	8,774	3,487	5,155	3,422	4,159	7,114
Venetie	0	106	13	0	15	0	475	107	50	143	0	27	155
Chalkyitsik	132	0	0	0	0	0	0	0	0	0	133	26	0
Chandalar/Black River Subtotal	132	106	13	0	15	0	475	107	50	143	133	53	155
District 5 Total	3,641	2,856	5,610	5,545	3,411	6,800	11,830	8,881	3,537	5,298	3,555	4,213	7,269
Manley	240	338	93	65	296	163	89	140	144	367	102	206	181
Minto	3	19	10	625	7	21	460	82	9	1	8	133	115
Nenana	775	19	360	2,193	1,171	1,771	388	1,419	753	506	83	904	967
Fairbanks [d]	90	36	47	31	308	45	73	255	94	372	183	102	168
Other [e]	3	0	2	0	11	14	0	0	311	7	46	3	66
District 6 Tanana R. Total	1,111	412	512	2,914	1,793	2,014	1,010	1,896	1,311	1,253	422	1,348	1,497
Upper Yukon River Total	11,798	7,856	22,093	25,972	20,163	21,164	27,837	27,033	18,365	21,509	15,697	17,576	23,182
Alaska, Yukon River Total [f]	64,895	58,239	72,260	68,304	69,672	78,902	90,907	76,805	68,394	67,742	65,948	66,674	76,550
Alaska, Yukon Area Total	78,072	72,155	87,056	82,272	77,934	93,259	115,078	92,926	86,514	80,539	88,373	79,498	93,663

Note: Estimates from 2006 and 2007 are preliminary. Does not include harvest from personal use permits.

[a] Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permit holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District.

Appendix B3.–Fall chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 2000–2010.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Hooper Bay	78	364	44	40	264	1	146	64	329	41	116	158	116
Scammon Bay	11	195	240	106	56	69	41	170	57	117	70	122	91
Coastal District Total	89	559	284	146	320	70	187	234	386	158	186	280	207
Nunam Iqua	105	176	284	127	49	310	735	152	59	41	143	148	259
Alakanuk	505	1,032	222	348	953	627	624	1,348	423	116	860	612	628
Emmonak	1,165	1,272	1,261	1,257	785	1,436	2,056	2,360	1,670	1,589	1,718	1,148	1,822
Kotlik	3,519	957	114	407	280	516	487	530	671	171	481	1,055	475
District 1 Subtotal	5,294	3,437	1,881	2,139	2,067	2,889	3,902	4,390	2,823	1,917	3,202	2,964	3,184
Mountain Village	313	470	478	873	918	1,290	2,398	1,073	926	926	133	610	1,323
Pitkas Point	5	34	16	49	0	6	5	44	101	76	10	21	46
St. Mary's	255	227	103	762	104	490	417	825	830	106	387	290	534
Pilot Station	852	1,522	680	823	1,108	838	785	741	917	265	833	997	709
Marshall	0	1,003	341	394	291	633	410	789	748	190	56	406	554
District 2 Subtotal	1,425	3,256	1,618	2,901	2,421	3,257	4,015	3,472	3,522	1,563	1,419	2,324	3,166
Russian Mission	37	76	164	615	172	667	251	530	578	205	104	213	446
Holy Cross	523	624	0	9	76	582	224	248	920	627	21	246	520
Shageluk	38	0	0	114	50	55	5	147	323	105	1,200	40	127
District 3 Subtotal	598	700	164	738	298	1,304	480	925	1,821	937	1,325	500	1,093
Lower Yukon River Total	7,317	7,393	3,663	5,778	4,786	7,450	8,397	8,787	8,166	4,417	5,946	5,787	7,443
Anvik	175	29	401	179	398	497	118	429	317	176	169	236	307
Grayling	284	314	52	441	267	1,009	691	317	1,012	490	202	272	704
Kaltag	190	607	314	725	687	1,089	823	910	620	200	658	505	728
Nulato	0	151	0	1,341	1,246	421	751	1,345	729	552	1,049	548	760
Koyukuk	239	517	255	835	344	803	1,147	927	1,177	578	792	438	926
Galena	564	420	349	1,510	1,587	2,695	1,632	1,471	1,364	4,306	1,968	886	2,294
Ruby/Kokrines	64	581	78	2,331	1,064	559	227	1,959	657	134	1,026	824	707
District 4 Subtotal	1,516	2,619	1,449	7,362	5,593	7,073	5,389	7,358	5,876	6,436	5,864	3,708	6,426
Huslia	35	683	0	1,786	1,139	1,614	313	272	64	86	403	729	470
Hughes	157	0	0	497	97	111	240	0	127	288	0	150	153
Allakaket	36	50	100	105	968	557	393	939	1,345	572	521	252	761
Alatna	15	0	0	0	0	0	0	7	0	0	0	3	1
Bettles	0	0	0	0	0	50	0	0	0	0	0	0	10
Koyukuk River Subtotal	243	733	100	2,388	2,204	2,332	946	1,218	1,536	946	924	1,134	1,396
District 4 Total(Incl. Koyukuk R.)	1,759	3,352	1,549	9,750	7,797	9,405	6,335	8,576	7,412	7,382	6,788	4,841	7,822

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Appendix B3.–Page 2 of 2.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Tanana	9,384	9,779	6,255	14,308	23,118	20,545	23,167	21,596	17,478	19,595	14,984	12,569	20,476
Rampart [a]	0	183	0	365	0	358	250	250	1,000	1,000	735	110	572
Fairbanks [b]	8	0	0	105	43	1,682	5,269	2,126	659	229	822	31	1,993
Stevens Village	10	20	0	857	1,080	246	50	199	643	770	2,706	393	382
Beaver	0	21	1	192	48	179	0	354	13	120	37	52	133
Ft. Yukon	355	2,209	3,523	7,963	7,302	8,088	5,178	8,264	14,252	2,829	6,006	4,270	7,722
Circle	0	2,588	74	499	1,022	918	664	1,286	3,198	110	927	837	1,235
Central	0	0	0	0	0	36	0	0	0	0	0	0	7
Eagle	32	2,714	339	2,871	5,482	17,356	16,801	18,676	15,269	10,941	15,008	2,288	15,809
Other [c]	1	0	100	0	13	117	44	46	3,183	71	120	23	692
District 5 Subtotal (Excluding Chandalar and Black Rivers)	9,790	17,514	10,292	27,160	38,108	49,525	51,423	52,797	55,695	35,665	41,345	20,573	49,021
Venetie	130	3,286	680	770	2,083	1,801	520	721	1,563	2,373	2,989	1,390	1,396
Chalkyitsik	0	73	4	340	479	337	215	213	0	45	0	179	162
Chandalar/Black River Subtotal	130	3,359	684	1,110	2,562	2,138	735	934	1,563	2,418	2,989	1,569	1,558
District 5 Total	9,920	20,873	10,976	28,270	40,670	51,663	52,158	53,731	57,258	38,083	44,334	22,142	50,579
Manley	0	1,230	947	1,303	1,504	2,985	3,374	3,419	2,490	4,126	2,696	997	3,279
Minto	2	251	100	675	0	600	242	155	28	0	70	206	205
Nenana	8	999	1,070	7,802	5,367	10,594	10,530	21,863	6,585	7,623	6,802	3,049	11,439
Fairbanks [d]	0	191	229	1,949	1,024	6,691	1,311	3,325	340	3,460	678	679	3,025
Other [e]	300	855	856	1,257	1,058	2,076	1,468	1,131	6,692	870	1,145	865	2,447
District 6 Tanana R. Total	310	3,526	3,202	12,986	8,953	22,946	16,925	29,893	16,135	16,079	11,391	5,795	20,396
Upper Yukon River Total	11,989	27,751	15,727	51,006	57,420	84,014	75,418	92,200	80,805	61,544	62,513	32,779	78,796
Alaska, Yukon River Total [f]	19,306	35,144	19,390	56,784	62,206	91,464	83,815	100,987	88,971	65,961	68,459	38,566	86,240
Alaska, Yukon Area Total	19,395	35,703	19,674	56,930	62,526	91,534	84,002	101,221	89,357	66,119	68,645	38,846	86,447

Note: Estimates from 2006 and 2007 are preliminary. Does not include harvest from personal use permits.

[a] Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permits holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District.

Appendix B4.–Coho salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 2000–2010.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Hooper Bay	218	439	125	244	9	0	175	26	66	24	45	207	58
Scammon Bay	4	63	123	48	54	279	160	84	50	222	79	58	159
Coastal District Total	222	502	248	292	63	279	335	110	116	246	124	265	217
Nunam Iqua	5	32	56	117	79	241	392	92	24	71	73	58	164
Alakanuk	84	414	183	193	207	322	101	857	157	194	449	216	326
Emmonak	191	342	514	547	296	191	450	1,032	717	401	362	378	558
Kotlik	787	486	542	403	593	222	234	284	313	181	238	562	247
District 1 Subtotal	1,067	1,274	1,295	1,260	1,175	976	1,177	2,265	1,211	847	1,122	1,214	1,295
Mountain Village	376	423	361	745	521	246	1,856	1,027	518	413	127	485	812
Pitkas Point	139	112	47	130	0	30	16	38	130	45	116	86	52
St. Mary's	117	610	209	276	258	252	171	97	591	151	92	294	252
Pilot Station	1,708	222	230	371	296	241	225	263	268	203	189	565	240
Marshall	11	73	386	64	425	341	191	922	490	245	33	192	438
District 2 Subtotal	2,351	1,440	1,233	1,586	1,500	1,110	2,459	2,347	1,997	1,057	557	1,622	1,794
Russian Mission	24	0	115	178	151	133	19	259	372	96	300	94	176
Holy Cross	70	0	0	498	27	84	16	213	38	120	0	119	94
Shageluk	0	0	0	35	106	0	48	267	0	105	53	28	84
District 3 Subtotal	94	0	115	711	284	217	83	739	410	321	353	241	354
Lower Yukon River Total	3,512	2,714	2,643	3,557	2,959	2,303	3,719	5,351	3,618	2,225	2,032	3,077	3,443
Anvik	0	13	0	12	288	406	0	807	40	137	28	63	278
Grayling	372	144	30	559	233	234	224	271	25	318	132	268	214
Kaltag	110	533	212	463	138	307	106	204	45	40	0	291	140
Nulato	60	258	78	928	203	60	214	130	195	171	242	305	154
Koyukuk	138	80	249	1,155	166	37	330	189	84	198	254	358	168
Galena	71	142	169	1,507	1,307	607	137	425	558	2,353	549	639	816
Ruby/Kokrines	173	871	69	648	1,540	361	11	168	291	314	148	660	229
District 4 Subtotal	924	2,041	807	5,272	3,875	2,012	1,022	2,194	1,238	3,531	1,353	2,584	1,999
Huslia	132	83	60	375	764	734	105	592	100	323	289	283	371
Hughes	12	117	100	20	110	20	150	100	0	89	0	72	72
Allakaket	0	25	56	99	17	205	25	66	152	43	88	39	98
Alatna	0	0	0	7	0	0	0	0	0	0	0	1	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0
Koyukuk River Subtotal	144	225	216	501	891	959	280	758	252	455	377	395	541
District 4 Total (Incl. Koyukuk R.)	1,068	2,266	1,023	5,773	4,766	2,971	1,302	2,952	1,490	3,986	1,730	2,979	2,540

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Appendix B4.–Page 2 of 2.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2004 Average	2005-2009 Average
Tanana	4,826	6,675	2,032	3,480	1,049	1,616	3,619	2,369	1,511	2,373	2,314	3,612	2,298
Rampart [a]	0	0	0	0	0	10	0	50	0	0	24	0	12
Fairbanks [b]	2	11	0	120	91	10	79	26	7	13	2	45	27
Stevens Village	0	2	0	0	100	0	0	0	0	90	428	20	18
Beaver	0	0	17	0	0	0	0	354	6	0	1	3	72
Fort Yukon [c]	129	972	14	0	19	394	35	567	1,618	2	244	227	523
Circle	0	0	0	244	100	100	22	0	0	13	164	69	27
Central	0	0	0	0	0	1	0	0	0	0	0	0	0
Eagle	0	0	1	0	14	15	0	0	0	0	1	3	3
Other [c]	30	0	0	25	0	13	0	0	61	7	0	11	16
District 5 Subtotal (Excluding Chandalar and Black Rivers)	4,987	7,660	2,064	3,869	1,373	2,159	3,755	3,366	3,203	2,498	3,178	3,991	2,996
Venetie	0	10	12	11	5	0	24	0	0	0	159	8	5
Chalkyitsik	0	4	0	7	45	0	0	0	0	0	267	11	0
Chandalar/Black River Subtotal	0	14	12	18	50	0	24	0	0	0	426	19	5
District 5 Total	4,987	7,674	2,076	3,887	1,423	2,159	3,779	3,366	3,203	2,498	3,604	4,009	3,001
Manley	2,180	2,637	1,617	886	1,384	2,510	1,671	1,126	1,901	2,308	1,832	1,741	1,903
Minto	3	0	250	423	5	0	14	155	0	0	0	136	34
Nenana	1,767	4,443	3,574	5,431	6,494	12,395	7,032	4,487	2,775	3,475	2,313	4,342	6,033
Fairbanks [d]	0	68	1,024	1,049	1,435	3,032	745	609	230	577	212	715	1,039
Other [e]	1,200	1,818	3,034	2,574	2,266	1,601	1,109	1,468	3,522	691	1,198	2,178	1,678
District 6 Tanana River Total	5,150	8,966	9,499	10,363	11,584	19,538	10,571	7,845	8,428	7,051	5,555	9,112	10,687
Upper Yukon Area Total	11,205	18,906	12,598	20,023	17,773	24,668	15,652	14,163	13,121	13,535	10,889	16,101	16,228
Alaska, Yukon River Total [f]	14,717	21,620	15,241	23,580	20,732	26,971	19,371	19,514	16,739	15,760	12,921	19,178	19,671
Alaska, Yukon Area Total	14,939	22,122	15,489	23,872	20,795	27,250	19,706	19,624	16,855	16,006	13,045	19,443	19,888

Note: Estimates from 2006 and 2007 are preliminary. Does not include harvest from personal use permits.

[a] Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permits holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District.

Appendix B5.–Personal use salmon harvests taken under authority of a permit, Tanana River drainage, 2000–2010.

	Subdistrict 6-C Personal Use Salmon Fishery						
	Number	Number	Number	Reported Harvest			
	of Permits	of Permits	Reporting		Summer	Fall	
Year	Issued	Returned	Harvest	Chinook	Chum	Chum	Coho
2000	70	69	16	75	30	1	0
2001	54	51	24	122	146	10	34
2002	57	55	29	126	175	3	20
2003	67	67	32	204	148	394	549
2004	68	66	35	201	231	230	233
2005	63	59	27	138	152	133	107
2006	60	60	35	89	262	333	279
2007	65	63	32	136	184	173	135
2008	51	50	25	126	138	181	50
2009	57	57	22	127	308	78	70
2010	67	67	38	162	319	3,209	1,062
Five Year Average							
2005-2009	59	58	28	123	209	180	128
Ten Year Average							
2000-2009	61	60	28	134	177	154	148

Note: Does not include personal use Tanana River whitefish/sucker permits. Salmon permits from 1987 to 1999 are in previous years of this annual report. Personal use permits were issued from 1988 to 1990 in Subdistricts 6-A and 6-B. A personal use salmon fishery in the Upper Tanana River existed in regulations from 1987 until July 1, 1991. No permits were ever issued for this fishery. Permit harvest numbers from 2006 and 2007 are preliminary.

Appendix B6.–Subsistence salmon harvests taken under authority of a permit in portions of District 5, Yukon Area, 2000–2010.

	Yukon River "Rampart Village" Area Subsistence Salmon Fishery [a]						
	Number	Number	Number	Reported Harvest			
	of Permits	of Permits	Reporting		Summer	Fall	
Year	Issued	Returned	Harvest	Chinook	Chum	Chum	Coho
2004	14	11	9	832	249	0	0
2005	22	19	17	1,721	663	2,023	10
2006	19	19	16	1,083	647	318	0
2007	23	19	15	1,744	495	2,050	50
2008	18	18	15	1,049	43	1,000	0
2009	25	24	20	1,404	159	1,070	4
2010	28	27	22	1,344	304	1,235	24
Five Year Average							
2005-2009	21	20	17	1,400	401	1,292	13

	Yukon River "Bridge" Area Subsistence Salmon Fishery [b]						
	Number	Number	Number	Reported Harvest			
	of Permits	of Permits	Reporting		Summer	Fall	
Year	Issued	Returned	Harvest	Chinook	Chum	Chum	Coho
2000	56	52	33	1,607	324	8	32
2001	65	62	38	1,819	176	0	13
2002	60	58	45	2,285	320	100	0
2003	86	80	62	2,670	89	104	145
2004	69	67	51	2,032	164	43	91
2005	76	72	57	1,847	643	17	9
2006	68	66	53	1,952	1,063	4,855	79
2007	85	80	51	1,707	177	626	26
2008	73	68	44	1,434	130	705	7
2009	68	66	38	1,248	28	996	106
2010	85	81	43	1,300	448	422	2
Five Year Average							
2005-2009	74	70	49	1,638	408	1,440	45
Ten Year Average							
2000-2009	71	67	47	1,860	311	745	51

	Upper Yukon River "Circle-Eagle" Area Subsistence Salmon Fishery [c]						
	Number	Number	Number	Reported Harvest			
	of Permits	of Permits	Reporting		Summer	Fall	
Year	Issued	Returned	Harvest	Chinook	Chum	Chum	Coho
2000	121	118	47	1,806	233	33	0
2001	98	93	33	1,688	561	5,322	0
2002	94	87	42	3,877	29	418	1
2003	95	85	58	3,406	189	3,374	0
2004	89	83	50	2,304	223	6,517	114
2005	89	81	55	4,004	241	18,427	130
2006	85	82	59	3,302	1,034	17,866	22
2007	78	71	51	3,548	218	20,005	0
2008 [d]	96	87	50	1,808	19	18,496	0
2009 [d]	73	70	34	1,092	2	11,051	13
2010 [d]	93	89	56	1,415	62	15,955	165
Five Year Average							
2005-2009	84	78	50	2,751	303	17,169	33
Ten Year Average							
2000-2009	92	86	48	2,684	275	10,151	28

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Note: Data from 1974 to 1999 are available in a previous report (Busher et al. 2009). Prior to 1988 reported harvest was expanded for unreturned permits. Beginning in 1988, reported harvest was not expanded. Permit harvest numbers from 2006 and 2007 are preliminary.

[a] That portion of the Yukon River drainage from Garnet Island to Hess Creek. Permits were not required in this area until 2004.

[b] That portion of the Yukon River drainage from Hess Creek to Dall River.

[c] That portion of the Yukon River drainage from the upstream mouth of Twenty-Two Mile Slough (downstream of Circle) to the United States/Canada border.

[d] Beginning in 2008, permits were issued for subarea SEU to record harvest taken upriver of the Eagle sonar site. These duplicate permits are included in the permit numbers.

Appendix B7.–Subsistence salmon harvests taken under authority of a permit, Tanana River drainage, 2000–2010.

	Subdistrict 6-A Subsistence Salmon Fishery [a]						
	Number of Permits	Number of Permits	Number Reporting	Reported Harvest			
Year	Issued	Returned	Harvest	Chinook	Summer Chum	Fall Chum	Coho
2000	24	24	12	80	240	0	2,441
2001	26	24	14	398	327	1,541	3,319
2002	24	23	20	542	101	1,341	2,246
2003	23	21	13	276	65	2,445	2,514
2004	23	23	12	339	308	2,148	2,004
2005	24	22	15	424	168	4,317	2,659
2006	24	24	18	503	114	3,694	2,283
2007	22	22	14	333	144	3,779	2,121
2008	38	35	19	115	241	2,583	2,002
2009	28	27	19	543	422	4,649	2,680
2010	26	26	14	361	106	3,176	1,986
Five Year Average 2005-2009	27	26	17	384	218	3,804	2,349
Ten Year Average 2000-2009	26	25	16	355	213	2,650	2,427

	Subdistrict 6-B Subsistence Salmon Fishery [b]						
	Number of Permits	Number of Permits	Number Reporting	Reported Harvest [c]			
Year	Issued	Returned	Harvest	Chinook	Summer Chum	Fall Chum	Coho
2000	81	79	33	903	869	210	2,709
2001	87	81	44	1,511	74	1,983	5,646
2002	62	60	25	525	711	2,193	8,032
2003	77	72	40	1,839	2,849	10,537	7,849
2004	60	56	30	1,049	1,485	6,805	9,580
2005	70	67	29	1,404	1,846	15,367	9,659
2006	78	76	42	423	885	13,047	7,897
2007	79	75	39	1,139	1,752	12,478	4,521
2008	73	71	35	486	854	7,815	4,009
2009	69	68	37	730	830	9,112	4,064
2010	93	85	32	583	316	7,625	3,429
Five Year Average 2005-2009	74	71	36	836	1,233	11,564	6,030
Ten Year Average 2000-2009	74	71	35	1,001	1,216	7,955	6,397

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	Upper Tanana River Drainage Subsistence Salmon Fishery [d]						
	Number of Permits	Number of Permits	Number Reporting	Reported Harvest			
Year	Issued	Returned	Harvest	Chinook	Summer Chum	Fall Chum	Coho
2000	41	36	16	0	2	100	0
2001	57	50	22	0	0	2	1
2002	32	31	16	0	0	25	0
2003	38	32	17	30	0	4	0
2004	35	30	14	0	0	0	0
2005	29	24	13	0	0	15	0
2006	23	22	17	0	0	10	0
2007	34	33	17	0	0	41	5
2008	58	50	19	0	0	17	6
2009	42	40	17	0	0	84	0
2010	41	34	19	10	0	12	0
Five Year Average							
2005-2009	37	34	17	0	0	33	2
Ten Year Average							
2000-2009	39	35	17	3	0	30	1

Note: Data from 1988 to 1999 are available in a previous report (Busher et al. 2009). Prior to 1988 reported harvest was expanded for unreturned permits. Beginning in 1988, reported harvest was not expanded. From 1973 to 1994, a Subdistrict 6-C Subsistence Salmon fishery occurred until regulations were repealed within the Fairbanks Nonsubsistence Area in 1994. Permit harvest numbers from 2006 and 2007 are preliminary.

[a] That portion of the Tanana River drainage from confluence with Yukon River upstream to the upstream edge of the confluence with the Kantishna River.

[b] That portion of the Tanana River drainage upstream of the confluence of the Kantishna River to the upstream edge of the confluence of the Wood River.

[c] Includes small numbers of salmon harvested and reported on the Tolovana River drainage (Subdistrict 6-B) subsistence pike permit, established in 1993.

[d] That portion of the Tanana River drainage upstream of the mouth of the Volkmar River including the Volkmar River on the north bank and the Johnson River including the Johnson River on the south bank.

Appendix B8.–Estimated pink salmon subsistence harvest by residents of surveyed communities, with community and district totals, Yukon Area, 2000–2010.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Estimated Total Even Years Average	Estimated Total Odd Years Average	Estimated Total All Years Average
Hooper Bay	902	32	5,475	473	5,418	860	1,433	113	1,013	957	219	2,848	487	1,668
Scammon Bay	96	362	417	997	2,508	1,645	1,381	1,435	2,766	1,186	2,245	1,434	1,125	1,279
Coastal District	998	394	5,892	1,470	7,926	2,505	2,814	1,548	3,779	2,143	2,464	4,282	1,612	2,947
Nunam Iqua	0	0	10	5	32	132	555	170	757	61	306	271	74	172
Alakanuk	38	0	130	0	233	49	115	32	494	24	151	202	21	112
Emmonak	0	9	39	4	32	54	225	51	641	5	206	187	25	106
Kotlik	263	0	849	198	318	155	219	129	1,161	42	124	562	105	333
District 1	301	9	1,028	207	615	390	1,114	382	3,053	132	787	1,222	224	723
Mountain Village	61	0	745	117	891	78	616	87	500	6	217	563	58	310
Pitkas Point	114	0	35	0	0	2	44	66	15	0	143	42	14	28
St. Mary's	54	0	7	0	137	144	236	32	367	5	543	160	36	98
Pilot Station	6	0	22	0	5	0	1	0	34	3	22	14	1	7
Marshall	0	0	473	0	105	6	3	0	26	0	21	121	1	61
District 2	235	0	1,282	117	1,138	230	900	185	942	14	946	899	109	504
Russian Mission	8	0	0	0	6	0	8	3	436	0	2	92	1	46
Holy Cross	20	0	0	0	0	0	17	0	20	0	0	11	0	6
Shageluk	0	0	0	130	0	0	0	0	0	9	0	0	28	14
District 3	28	0	0	130	6	0	25	3	456	9	2	103	28	66
Anvik	30	0	0	240	0	0	0	0	23	2	0	11	48	30
Grayling	0	0	30	3	0	3	0	0	200	0	0	46	1	24
Kaltag	0	0	0	0	10	4	0	0	383	0	0	79	1	40
Nulato	0	0	50	0	0	0	1	0	35	0	0	17	0	9
Koyukuk	0	0	4	0	0	0	0	0	67	0	0	14	0	7
Galena	0	0	50	0	0	0	0	0	31	0	0	16	0	8
Ruby	1	0	87	0	2	0	0	0	184	0	0	55	0	27
Huslia	0	0	0	0	0	0	0	0	100	0	0	20	0	10
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	31	0	221	243	12	7	1	0	1,023	2	0	258	50	154

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Appendix B8.–Page 2 of 2.

Community	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Estimated Total Even Years Average	Estimated Total Odd Years Average	Estimated Total All Years Average
Tanana	0	0	0	0	0	0	0	0	80	0	0	16	0	8
Stevens Village	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Yukon	0	0	0	0	0	0	0	0	196	0	0	39	0	20
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5	0	0	0	0	0	0	0	0	276	0	0	55	0	28
Survey Totals	1,593	403	8,423	2,167	9,697	3,132	4,854	2,118	9,529	2,300	4,199	6,819	2,024	4,422
CI (95%)	559	416	4,091	964	2,829	1,521	990	739	1,818	1,184	1,209	-	-	-

Note: Estimates from 2006 and 2007 are preliminary. CI (95%) is the annual 95% confidence interval. Dashes indicate indefinable values.

Appendix B9.–Households with dogs, number of dogs, and salmon fed to dogs, as estimated in surveyed communities or reported in permit areas, Yukon Area, 2005–2010.

Districts Survey or Permit and Year	Number of Households with Dogs	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
2005						
Coastal District Survey	190	375	0	0	0	0
District 1 Survey	262	482	302	46	34	382
District 2 Survey	281	563	1,315	137	104	1,556
District 3 Survey	78	214	2,288	342	70	2,700
District 4 Survey	364	1,325	5,993	3,236	1,464	10,693
District 5 Survey	277	1,229	4,566	24,982	1,498	31,046
District 5 Permit [a, b]	59	609	-	-	-	8,316
District 6 Permit [b]	143	1,175	-	-	-	27,179
Totals	1,654	5,972	14,464	28,743	3,170	81,872
2006						
Coastal District Survey	197	397	0	37	63	100
District 1 Survey	272	457	270	147	0	417
District 2 Survey	294	612	373	355	318	1,046
District 3 Survey	109	288	95	95	0	190
District 4 Survey	426	1,251	9,885	1,298	77	11,260
District 5 Survey	238	1,257	7,664	23,607	3,236	34,507
District 5 Permit [a, b]	62	596	-	-	-	12,934
District 6 Permit [b]	140	1,027	-	-	-	15,194
Totals	1,738	5,885	18,287	25,539	3,694	75,648
2007						
Coastal District Survey	132	214	142	0	0	142
District 1 Survey	230	517	1,096	38	59	1,193
District 2 Survey	267	521	763	232	443	1,438
District 3 Survey	86	285	375	0	30	405
District 4 Survey	305	982	12,326	2,807	1,096	16,229
District 5 Survey	247	949	7,233	26,600	2,763	36,596
District 5 Permit [a, b]	52	567	-	-	-	17,891
District 6 Permit [b]	175	890	-	-	-	15,945
Totals	1,494	4,925	21,935	29,677	4,391	89,839
2008 [c]						
Coastal District Survey	155	325	141	0	0	141
District 1 Survey	304	595	110	0	0	110
District 2 Survey	277	546	53	131	136	320
District 3 Survey	110	314	72	157	0	229
District 4 Survey	395	1,178	11,416	10,342	650	22,408
District 5 Survey	244	887	2,575	27,958	2,346	32,879
District 5 Permit [a, b]	55	552	-	-	-	14,103
District 6 Permit [b]	186	882	-	-	-	10,345
Totals	1,726	5,279	14,367	38,588	3,132	80,535

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Appendix B9.–Page 2 of 2.

Districts Survey or Permit and Year	Number of Households with Dogs	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
2009						
Coastal District Survey	104	133	0	0	0	0
District 1 Survey	228	390	632	75	0	707
District 2 Survey	269	457	100	0	44	144
District 3 Survey	90	237	0	160	72	232
District 4 Survey	371	938	12,973	2,855	2,502	18,330
District 5 Survey	231	913	3,385	20,459	1,678	25,522
District 5 Permit [a, b]	47	522	-	-	-	7,649
District 6 Permit [b]	155	630	-	-	-	14,253
Totals	1,495	4,220	17,090	23,549	4,296	66,837
2010						
Coastal District Survey	207	410	118	0	0	118
District 1 Survey	299	595	20	0	0	20
District 2 Survey	284	494	27	0	104	131
District 3 Survey	85	235	63	61	183	307
District 4 Survey	379	990	6,111	2,551	595	9,257
District 5 Survey	255	910	2,024	21,167	2,207	25,398
District 5 Permit [a, b]	59	432	-	-	-	13,707
District 6 Permit [b]	184	998	-	-	-	12,011
Totals	1,752	5,064	8,363	23,779	3,089	60,949
Five Year Average 2005 to 2009						
Coastal District Survey	156	289	57	7	13	77
District 1 Survey	259	488	482	61	19	562
District 2 Survey	278	540	521	171	209	901
District 3 Survey	95	268	566	151	34	751
District 4 Survey	372	1,135	10,519	4,108	1,158	15,784
District 5 Survey	247	1,047	5,085	24,721	2,304	32,110
District 5 Permit [a, b]	55	569	-	-	-	12,179
District 6 Permit [b]	160	921	-	-	-	16,583
Totals	1,621	5,256	17,229	29,219	3,737	78,946

Note: Beginning in 1993, the estimated number of salmon includes those retained from subsistence and commercial-related harvests. Dashes indicate information was not collected. Data from 1992 to 2004 are included in earlier reports (Busher et al. 2009). Estimates from 2006 and 2007 are preliminary.

[a] Permit totals do not include the community of Stevens Village.

[b] Does not include duplicate information from households with more than one permit.

[c] Corrected from 2008 annual report to include 3,299 salmon fed to dogs retained for subsistence from commercial fisheries in surveyed communities in Districts 2 through 5.

Appendix B10.–Estimated and reported subsistence and personal use harvest of miscellaneous fish species, Yukon Area, 2000–2010.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Five Year Average 2000-2004	Five Year Average 2005-2009
Survey Estimates [a]													
Whitefish	45,292	86,200	78,489	68,416	64,039	48,862	60,923	64,338	54,729	51,778	50,232	68,487	56,126
Pike	9,174	16,753	18,906	22,341	18,738	29,799	28,133	25,947	16,053	8,061	14,086	17,182	21,599
Sheefish	6,581	14,384	15,960	14,280	16,896	13,764	12,745	13,203	10,154	7,861	9,231	13,620	11,545
Survey Reported													
Burbot	2,168	2,836	5,809	3,000	2,628	3,138	5,069	3,500	3,273	2,027	2,743	3,288	3,401
Lamprey	785	4,520	623	29,886	33,919	38,115	2,092	12,584	803	1,699	10,863	13,947	11,059
Tomcod	2,999	7,278	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	3,978	5,006	6,972
Grayling	346	1,503	1,408	2,421	1,645	1,258	1,145	2,296	857	667	1,571	1,465	1,245
Suckers	364	277	546	234	178	1,452	105	225	25	59	273	320	373
Arctic Char	32	251	198	376	116	217	345	181	184	43	148	195	194
Blackfish	42,110	85,938	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	68,873	190,510	153,591
Sockeye Salmon	-	-	-	-	787	648	333	493	213	216	263	-	381
Permit Reported													
Whitefish	3,205	2,430	2,856	5,508	4,402	3,671	3,399	3,328	3,402	4,039	3,040	3,680	3,568
Pike	687	451	791	1,266	606	641	1,008	2,094	1,678	733	257	760	1,231
Sheefish	85	75	66	203	97	155	80	83	111	76	121	105	101
Burbot	95	124	65	129	127	78	127	99	89	119	45	108	102
Grayling	521	51	138	1,228	1,032	800	507	525	488	363	201	594	537
Suckers	739	236	344	978	341	694	770	243	298	518	170	528	505
Yukon Area Totals													
Whitefish	48,497	88,630	81,345	73,924	68,441	52,533	64,322	67,666	58,131	55,817	53,272	72,167	59,694
Pike	9,861	17,204	19,697	23,607	19,344	30,440	29,141	28,041	17,731	8,794	14,343	17,943	22,829
Sheefish	6,666	14,459	16,026	14,483	16,993	13,919	12,825	13,286	10,265	7,937	9,352	13,725	11,646
Burbot	2,263	2,960	5,874	3,129	2,755	3,216	5,196	3,599	3,362	2,146	2,788	3,396	3,504
Lamprey	785	4,520	623	29,886	33,919	38,115	2,092	12,584	803	1,699	10,863	13,947	11,059
Tomcod	2,999	7,278	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	3,978	5,006	6,972
Grayling	867	1,554	1,546	3,649	2,677	2,058	1,652	2,821	1,345	1,030	1,772	2,059	1,781
Suckers	1,103	513	890	1,212	519	2,146	875	468	323	577	443	847	878
Arctic Char	32	251	198	376	116	217	345	181	184	43	148	195	194
Blackfish	42,110	85,938	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	68,873	190,510	153,591
Sockeye Salmon	-	-	-	-	787	648	333	493	213	216	263	-	381

Note: Dashes indicate information was not collected. Estimates from 2006 and 2007 are preliminary.

[a] Subsistence whitefish, pike, and sheefish estimates in surveyed communities is based on a stratified random sample of households as designated for the estimation of subsistence salmon harvests.

Appendix B11.–Households responses assessing their success of subsistence salmon needs being met (in percent), by species, Yukon Area, 2005–2010.

			Chinook Salmon				
			Total Number	Household Responses		Household Responses	
	Total	Households	of Household	Indicated ≤ 50% Needs Met		Indicated > 50% Needs Met	
Year	Households	Contacted	Responses [a]	Responses	Percent	Responses	Percent
2005	2,231	1,022	749	223	0.30	526	70%
2006	2,398	1,057	856	401	0.47	455	53%
2007	2,353	1,086	914	422	0.46	492	54%
2008	2,470	1,153	970	488	0.50	482	50%
2009 [b]	2,366	1,036	618	457	0.74	161	26%
2010	2,528	1,153	517	317	0.61	200	39%
2005-2009 Avg	2,364	1,071	771	398	0.49	423	51%

			Summer Chum Salmon				
			Total Number	Household Responses		Household Responses	
	Total	Households	of Household	Indicated ≤ 50% Needs Met		Indicated > 50% Needs Met	
Year	Households	Contacted	Responses [a]	Responses	Percent	Responses	Percent
2005	2,231	1,022	570	165	0.29	405	71%
2006	2,398	1,057	686	247	0.36	439	64%
2007	2,353	1,086	706	299	0.42	407	58%
2008	2,470	1,153	685	265	0.39	420	61%
2009 [b]	2,366	1,036	382	228	0.60	154	40%
2010	2,528	1,153	363	203	0.56	160	44%
2005-2009 Avg	2,364	1,071	565	241	0.41	365	59%

			Fall Chum Salmon				
			Total Number	Household Responses		Household Responses	
	Total	Households	of Household	Indicated ≤ 50% Needs Met		Indicated > 50% Needs Met	
Year	Households	Contacted	Responses [a]	Responses	Percent	Responses	Percent
2005	2,231	1,022	380	145	0.38	235	62%
2006	2,398	1,057	408	220	0.54	188	46%
2007	2,353	1,086	580	396	0.68	184	32%
2008	2,470	1,153	470	289	0.61	181	39%
2009 [b]	2,366	1,036	196	165	0.84	31	16%
2010	2,528	1,153	133	100	0.75	33	25%
2005-2009 Avg	2,364	1,071	361	243	0.61	164	39%

			Coho Salmon				
			Total Number	Household Responses		Household Responses	
	Total	Households	of Household	Indicated ≤ 50% Needs Met		Indicated > 50% Needs Met	
Year	Households	Contacted	Responses [a]	Responses	Percent	Responses	Percent
2005	2,231	1,022	226	104	0.46	122	54%
2006	2,398	1,057	181	109	0.60	72	40%
2007	2,353	1,086	399	283	0.71	116	29%
2008	2,470	1,153	272	204	0.75	68	25%
2009 [b]	2,366	1,036	103	90	0.87	13	13%
2010	2,528	1,153	85	56	0.66	29	34%
2005-2009 Avg	2,364	1,071	211	158	0.68	78	32%

Note: Estimates from 2006 and 2007 are preliminary; estimates from 2003 and 2004 are included in previous year's reports (Busher et al. 2009).

[a] Total number of households surveyed who answered this question.

[b] In 2009 the survey question was changed to ask 'How many (of each species) do you usually get?' and the percent of needs met was calculated from the number of salmon harvested or received.

APPENDIX C. HISTORY OF REGULATORY CHANGES

Appendix C1.–Definitions and a brief history of regulatory changes made to the Yukon Area Alaskan subsistence and personal use salmon fisheries since 1960.

Definitions: Sec. 16.05.940. In AS 16.05 - AS 16.40

(25) "personal use fishing" means the taking, fishing for, or possession of finfish, shellfish, or other fishery resources, by Alaska residents for personal use and not for sale or barter, with gill or dip net, seine, fish wheel, long line, or other means defined by the Board of Fisheries

(31) "subsistence fishing" means the taking of, fishing for, or possession of fish, shellfish, or other fisheries resources by a resident domiciled in a rural area of the state for subsistence uses with gill net, seine, fish wheel, long line, or other means defined by the Board of Fisheries;

(33) "subsistence uses" means the noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption; in this paragraph, "family" means persons related by blood, marriage, or adoption, and a person living in the household on a permanent basis

History of regulatory changes:

1960

- Alaska Department of Fish and Game is given responsibility to manage all Alaskan subsistence and commercial fisheries.
- Commercial fishing is open six days per week, subsistence fishing is open 5.5 days per week.
- Once commercial fishing season ends, subsistence fishing is open 7 days per week.

1961

- Lower Yukon Area (Districts 1 – 3) commercial fisheries are open 4 days per week.
- Directed fall chum salmon fishery begins.

1962

- Four commercial fishing districts established within Alaska portion of the Yukon River drainage.
- Subsistence fishing in the Lower Yukon Area is reduced to 4 days per week (concurrent with commercial).

1974

- Six commercial fishing districts established within Alaska portion of the Yukon River drainage.
- Subsistence fishing restrictions are implemented along the southern portion of the Dalton Highway.
- Upper Yukon Area (Districts 4 – 6) begins concurrent subsistence and commercial fishing 5 days per week.
- Subsistence fishing schedules are linked to commercial fishing schedules in Districts 1-6.

1974–77

- Legalized sale of salmon roe from Yukon Area subsistence caught salmon.

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1976

- Limited entry begins for Yukon River commercial fisheries.
- Streams crossing the Dalton Highway north of the Yukon River are closed to subsistence fishing.

1977

- Lower Yukon Area is reduced to subsistence/commercial fishing 3 days per week during the commercial Chinook salmon season.
- Lower Yukon Area is reduced to subsistence/commercial fishing 3.5 days per week during the fall chum salmon season.

1978

- Passage of the *State of Alaska Subsistence Act*, which provides a rural subsistence priority in times of shortage.
- Commercial salmon roe fishery begins in the Upper Yukon Area.

1979

- Lower Yukon Area is reduced to subsistence/commercial fishing 3 days per week during the fall chum salmon season.

1980

- ANILCA (*Alaska National Interest Lands Conservation Act*) provides for a rural subsistence priority on Federal lands.

1980–89

- Unified management of subsistence fishing by the State of Alaska consistent with ANILCA and the *State of Alaska Subsistence Act*.

1981

- Commercial fishing periods in the Lower Yukon Area can be established inseason by state emergency order.

1982

- Tanana River Subdistrict 6-C Subsistence Management Plan established.

1983–84

- Lower Yukon Area subsistence periods established inseason by emergency order.

1986

- Personal use fisheries created for Alaska residents living in non-rural areas. Non-rural residents are classified as “personal use” fishermen rather than subsistence fishermen regardless of where they fish.

1987

- Regulations for a personal use fall chum salmon fishery established in the Yukon Area.
- Regulatory *Yukon Area Fall Chum Salmon Management Plan* established.

1988

- Subdistricts 6-A, 6-B and 6-C subsistence and personal use periods are limited to two 42 hour periods per week.
- “Old Minto Area” is open to subsistence salmon fishing 5 days per week.
- Upper Tanana Area remains open to subsistence fishing 7 days per week.
- Regulations for personal use fisheries for all salmon species established in the Yukon Area.

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1990

- Court case removes rural residency requirement for subsistence participation (*McDowell v. State*).
- Regulatory *Yukon River Summer Chum Salmon Management Plan* established.
- Regulatory *Tanana River Salmon Management Plan* established.

1992

- Alaska divided into subsistence and non-subsistence areas. Personal use fishing only allowed within the non-subsistence areas.
- Upper Yukon Area commercial periods established inseason by emergency order.

1993

- Regulations implemented separating subsistence and commercial salmon fishing times in Districts 1-3 and Subdistrict 4-A (prior to 1993 subsistence and commercial periods coincided).
    - In Districts 1-3 subsistence salmon fishing is open 24 hours/day until commercial season begins. Once commercial fishing begins subsistence fishing is closed 18 hours before, during and 12 hours after each commercial period. Additional periods for subsistence salmon fishing may be authorized.
    - Subdistricts 4-B, 4-C, 5-B and 5-C subsistence salmon fishing is open 7 days per week until commercial season begins, then commercial and subsistence periods coincide. Additional periods for subsistence salmon fishing may be authorized.
    - Koyukuk River, Kantishna River and Subdistrict 5-D remain open to subsistence salmon fishing 7 days per week.
- Court case declares subsistence and non-subsistence areas are unconstitutional and subsistence salmon fishing again allowed statewide (*State v. Kenaitze Indian Tribe*).
- Regulatory *Toklat River Fall Chum Salmon Rebuilding Management Plan* established.
- Amounts necessary for subsistence was defined for Yukon-Northern Area:
    - 348,000–503,000 (all salmon species combined).

1994

- Subdistrict 5-A subsistence salmon fishing is allowed 5 days per week once commercial season ends.
- Regulatory *Anvik River Chum Salmon Fishery Management Plan* established.

1995

- Alaska Supreme Court reverses decision in *Kenaitze* case and Alaska is again divided into subsistence and non-subsistence areas. Personal use fishing is only allowed within the non-subsistence areas.
- Ninth Circuit Court finds that Federal jurisdiction for fisheries should be extended to navigable waters on Federal lands (*State of Alaska v. Babbitt* a.k.a. *Katie John decision*). US Senator Stevens delays implementation.

1998

- Subdistrict 5-A subsistence salmon fishing is allowed 7 days per week once commercial season ends.
- Regulatory *Yukon River King Salmon Management Plan* established.

1999

- Subdistrict 5-A subsistence salmon fishing is returned to 5 days per week once commercial season ends because in 1998 Toklat River escapement goals were not met.
- Regulatory *Yukon River Coho Salmon Management Plan* established.

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2000

- U.S. Fish and Wildlife Service begins first season of joint subsistence fisheries management authority with ADF&G in portions of the Yukon Area.

2001

- Subsistence fishing schedule "windows" established for times of conservation implemented throughout the entire Yukon River Area when there is no commercial fishing season:
    - Districts 1-3 area open to subsistence salmon fishing for two 36 hour periods per week.
    - District 4 and Subdistricts 5-B and 5-C are open to subsistence salmon fishing for two 48 hour periods per week.
    - Subdistrict 5-A, 6-A and 6-B (includes the Kantishna River) are open to subsistence salmon fishing for two 42 hour periods per week.
    - The "Old Minto Area" is open to subsistence salmon fishing 5 days per week.
    - The Coastal District, Koyukuk River and Subdistrict 5-D are open to subsistence salmon fishing 7 days per week.
    - Subdistrict 6-C is open to personal use salmon fishing for two 42 hour periods per week.
- Amounts necessary for subsistence defined by salmon species for Yukon Area:
    - Chinook salmon: 45,500–66,704 fish
    - Summer chum salmon: 83,500–142,192 fish
    - Fall chum salmon: 89,500–167,900 fish
    - Coho salmon: 20,500–51,980 fish

2004

- *Yukon River King Salmon Management Plan*.
    - During times of chum salmon conservation, the commercial fish wheel season may be closed by emergency order and immediately reopen the season during which set gillnet gear may be used instead of a fish wheel.
- *Yukon River Drainage Fall Chum Salmon Management Plan* revised.
    - Plan to be implemented from July 16 through December 31 to ensure adequate escapement for fall chum salmon into the Yukon River drainage and to provide management guidelines to ADF&G.
    - Subsistence fishing schedule of seven days a week fishing in the Kantishna River.
    - Returned Subdistrict 5-A to two 48-hour periods per week from 6:00 pm. Tuesdays until 6:00 p.m. Thursdays and from 6:00 pm. Fridays until 6:00 p.m. Sundays.
- *Toklat River Fall Chum Salmon Rebuilding Management Plan* repealed and elements of the plan incorporated into the *Yukon River Drainage Fall Chum Salmon Management Plan*.
- *Tanana River Salmon Management Plan.*
    - In Subdistricts 6-A and 6-B, through September 30, the subsistence salmon fishing periods are from 6:00 p.m. Fridays until 12:00 noon Sundays and from 6:00 p.m. Mondays until 12:00 Wednesdays, unless altered by emergency order. This allows for possible seven days a week subsistence fishing beginning October 1.
- In Subdistrict 4-A, king salmon may be taken during the commercial fishing season with drift gillnet gear only for two 48-hour fishing periods per week, by emergency order from 6:00 p.m. Sundays until 6:00 p.m. Tuesdays and from 6:00 p.m. Wednesdays until 6:00 p.m. Fridays.

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- New subsistence required permit areas in portions of the Koyukuk River along the Dalton Highway and Yukon River drainage from Garnet Island to Hess Creek:
    - South Fork of the Koyukuk River drainage upstream from the mouth of the Jim River and the Middle Fork of the Koyukuk River drainage upstream from the mouth of the North Fork. The Koyukuk River areas along the Dalton Highway were closed but are now opened for subsistence fishing for nonsalmon species with permit and gear stipulations. Gillnets gear may be used only from November 1 through June 30 and a gillnet mesh size may not exceed three and one-half inches.
    - Yukon River drainage upstream from the westernmost tip of Garnet Island to the mouth of Hess Creek of Subdistrict 5-C (encompassing the community or Rampart) in an effort to document harvest by transient fishermen. This change now requires a subsistence fishing permit in the entire Subdistrict 5-C.

2007

- Chinook salmon harvests in Districts 1 through 3 between June 1 and July 15 must be marked by the removal of both lobes of the tail. This is a change from the requirement to remove the dorsal fin, which is more difficult to remove, and potentially exposes the flesh.
- Coho salmon management plan was revised.
    - Must be projected to provide a harvestable surplus.
    - Linked to Yukon River Drainage fall chum salmon management plan. Was adjusted from assessment of 625,000 to 550,000 fall chum salmon.
    - Fall chum salmon are considered incidental harvest during coho salmon openings.
    - End dates of plan in districts and subdistricts were adjusted.